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(54) Title: CRYSTAL OF EGFR EXTRACELLULAR DOMAIN AND CETUXIMAB FAB FRAGMENT AND USES THEREOF

(57) Abstract: The present invention relates to co-crystals of cetuximab Fab in a complex with extracellular domain of EGFR, and structure coordinates obtained from such crystal. Such coordinates are useful for identifying mimetics that bind to the extracellular domain of EGFR. Such mimetics may for example inhibit binding of ligand to EGFR, inhibit activation of EGFR, and/or reduce proliferation of tumor cells.

WO 2006/009694 A2

CRYSTAL OF EGFR EXTRACELLULAR DOMAIN AND CETUXIMAB FAB FRAGMENT AND USES THEREOF

Field of the Invention

[0001] The present invention relates to co-crystals of cetuximab Fab in a complex with extracellular domain of EGFR, and structure coordinates obtained from such crystal. Such coordinates are useful for identifying mimetics, preferably EGFR antagonists, that bind to the extracellular domain of EGFR. Such mimetics may for example inhibit binding of ligand to EGFR, inhibit activation of EGFR, and/or reduce proliferation of tumor cells.

Background of the Invention

[0002] Although normal cells proliferate by the highly controlled activation of growth factor receptor tyrosine kinases ("RTKs") by their respective ligands, cancer cells also proliferate by the activation of growth factor receptors, but lose the careful control of normal proliferation. The loss of control may be caused by numerous factors, such as the overexpression of growth factors and/or receptors, and autonomous activation of biochemical pathways regulated by growth factors. Some examples of RTKs involved in tumorigenesis are the receptors for epidermal growth factor receptor (EGFR) (also known as human EGF receptor-1 (HER1)), platelet-derived growth factor (PDGFR), insulin-like growth factor (IGFR), nerve growth factor (NGFR), and fibroblast growth factor (FGF). Binding of growth factors to these cell surface receptors induces receptor activation, which initiates and modifies signal transduction pathways and leads to cell proliferation and differentiation.

[0003] Generally, RTKs have an extracellular region, a transmembrane hydrophobic region, and an intracellular region bearing a kinase domain. The first step in the activation of an RTK is ligand-induced dimerization leading to exposure of phosphorylation sites, activation of the intracellular kinase domain and recruitment of down-stream signaling molecules. The most commonly observed mode of RTK dimerization involves the "crosslinking" of two receptors having exposed dimerization interfaces by binding of a bivalent ligand. For EGFR, structural data published in recent years have led to the proposal of quite a different mechanism. In the absence of ligand, a distinct configuration of the receptor monomer occludes the dimerization interface of the receptor by burying it in an intramolecular "tether." Ligand binding induces a

conformational change in EGFR that exposes this dimerization site, promoting dimerization and receptor activation.

[0004] EGFR is a 170 kD membrane-spanning glycoprotein with an extracellular ligand binding domain, a transmembrane region and a cytoplasmic protein tyrosine kinase domain. Examples of ligands that stimulate EGFR include epidermal growth factor (EGF), transforming growth factor-α (TGF-α), heparin-binding growth factor (HBGF), β-cellulin, and Cripto-1. Binding of specific ligands results in EGFR autophosphorylation, activation of the receptor's cytoplasmic tyrosine kinase domain and initiation of multiple signal transduction pathways that regulate tumor growth and survival.

[0005] Growth factors that activate EGFR are also thought to play a role in tumor angiogenesis. Angiogenesis, which refers to the formation of capillaries from pre-existing vessels in the embryo and adult organism, is known to be a key element in tumor growth, survival and metastasis. It has been reported that EGFR mediated stimulation of tumor cells leads to increased expression of the angiogenic factors vascular endothelial growth factor (VEGF), interleukin-8 (IL-8), and basic fibroblast growth factor (bFGF), which can lead to activation of tumor-associated vascular endothelial cells. Stimulation of tumor associated vascular endothelial cells may also occur through activation of their own EGF receptors, by tumor produced growth factors such as TGF-α and EGF.

[0006] It has been reported that many human tumors express or overexpress EGFR. Expression of EGFR is correlated with poor prognosis, decreased survival, and/or increased metastasis. EGFR, because of this involvement in tumorigenesis, has been specifically targeted for anticancer therapies. These therapies have predominantly included either a monoclonal antibody that blocks binding of ligand to the extracellular domain of the receptor or a synthetic tyrosine kinase inhibitor that acts directly on the intracellular region to prevent signal transduction.

[0007] Cetuximab MAb (ERBITUX®) is a recombinant, human/mouse chimeric, monoclonal antibody composed of the Fv regions of a murine anti-EGFR antibody with human IgG1 heavy and kappa light chain constant regions and has an approximate molecular weight of 152 kDa. Cetuximab binds specifically to the extracellular domain of the human EGFR, and is an EGFR antagonist, which blocks ligand binding to EGFR, prevents receptor activation, and

inhibits growth of tumor cells that express EGFR. Cetuximab has been approved for use in combination with or without irinotecan in the treatment of patients with epidermal growth factor receptor-expressing, metastatic colorectal cancer who are refractory or can not tolerate irinotecan-based chemotherapy. Cetuximab has been shown to be effective for treatment of psoriasis.

[0008] The crystal structure of an EGF-EGFR extracellular domain complex, wherein the receptor domain exists in dimeric form, has been provided Ogiso, H. et al., 2002, Cell *110*, 775-787. The structure of an EGF-EGFR extracellular domain complex obtained by crystallization at low, non-physiological pH, wherein the receptor exists in monomeric form has also been provided Ferguson, K.M. et al., 2003, Mol Cell *11*, 507-517. The structure of a transforming growth factor alpha (TGF-α)-EGFR extracellular domain complex in dimeric form has also been determined (Garrett, T.P. et al., 2002, Cell *110*, 763-773).

[0009] However, the crystal structure of EGFR with an antagonist, particularly cetuximab Fab, has not been previously determined. The invention disclosed herein provides for the first time crystals and atomic coordinates of a complex of an EGFR extracellular domain and cetuximab Fab. Accordingly, the present invention provides methods for identifying potential mimetics by screening against at least a subset of the coordinates obtained from such a crystal. Mimetics may be assayed for biological activities to obtain EGFR antagonists useful for treatment of EGFR dependent conditions or diseases. EGFR antagonists interact with the receptor to inhibit EGFR tyrosine kinase activity, without limitation, by blocking ligand binding, inhibiting receptor dimerization, ultimately inhibiting receptor substrate phosphorylation, gene activation, and cellular proliferation. Preferably, the antagonists have substantially similar or improved effectiveness as compared to cetuximab. The antagonists are used for treatment of conditions associated with EGFR expression. Such diseases include tumors that express, or overexpress EGFR and which may be stimulated by a ligand of EGFR. Also included are hyperproliferative diseases stimulated by a ligand of EGFR.

Summary of the Invention

[0010] In one aspect, the present invention provides a crystal of a receptor-antibody complex comprising a receptor-antibody complex of an epidermal growth factor receptor (EGFR) extracellular domain and cetuximab Fab, wherein the crystal has a resolution

determined by X-ray crystallography of better than about 5.0 Angstroms. Preferably, the crystal has a resolution determined by X-ray crystallography of better than about 4.0 Angstroms, more preferably better than about 3.0 Angstroms. Preferably the crystal belongs to space group $P2_1$ and has unit cell dimensions a = 77.8 Å, b = 70.9 Å, c = 147.1 Å, and β = 102.5°. Preferably, the crystal has atomic coordinates provided in Table 2.

[0011] In another aspect, the present invention provides a method for preparing a crystal of a complex of an epidermal growth factor receptor (EGFR) extracellular domain and cetuximab Fab comprising preparing a solution containing the extracellular domain of EGFR and cetuximab Fab fragment, and growing the crystal. Preferably the pH of the solution is about 6.0 to about 8.0.

[0012] In another aspect, the present invention provides a method of identifying a mimetic of cetuximab comprising comparing a three-dimensional structure of the mimetic with a three-dimensional structure determined for the above crystal complex. Preferably, the three dimensional structure of the mimetic is compared with at least a subset of the coordinates provided in Table 2.

[0013] In one embodiment, identifying a mimetic is carried out by comparing the three-dimensional structure of the mimetic against the coordinates of at least one EGFR amino acid bound by cetuximab Fab. Such EGFR amino acid is selected from the group consisting of Gln 384, Gln 408, Ser 418, Ser 440, Lys 465, Ser 468, and Asn 469. In one embodiment, the locations of atoms of the mimetic that contact EGFR correspond to atoms of cetuximab that contact EGFR. In yet another embodiment, screening is carried out by comparing a three dimensional structure of a mimetic with the atomic coordinates of a region of EGFR selected from the group consisting of about amino acid residue 350 to about amino acid residue 354, about amino acid residue 380 to about amino acid residue 385, about amino acid residue 405 to about amino acid residue 420, about amino acid residue 435 to about amino acid residue 475 and combinations thereof.

[0014] The mimetic may be a small molecule, a peptide, or a polypeptide, preferably an antibody or a fragment thereof.

[0015] In another aspect of the invention, a mimetic that is an antibody or a fragment thereof is identified by introducing one or more substitutions in at least a single CDR region of cetuximab and/or at non-CDR amino acids of the antibody that interact with the CDR and affect its conformation. In one embodiment, at most a single substitution is made in each CDR. In another embodiment, substitution are made solely in CDR3 or at amino acids that affect the conformation of CDR3.

[0016] In another aspect, the present invention provides the above methods carried out with use of a computer.

[0017] The invention further provides a method for synthesizing the mimetic and assaying its binding or physiological activity to select EGFR antagonists useful for inhibiting EGFR function and treating EGFR-associated diseases or conditions. In an aspect of the invention, a mimetic is provided that inhibits tyrosine kinase activity of the receptor. In another aspect of the invention, the mimetic inhibits dimerization of EGFR expressed by a cell. Preferably, the mimetic blocks binding of EGF to EGFR. Mimetics of the invention bind to EGFR and inhibit EGFR functional activity, preferably to a similar or greater extent than cetuximab.

[0018] In another aspect, the present invention provides a computer-assisted method for identifying a mimetic of cetuximab comprising a processor, a data storage system, an input device, and an output device, comprising: inputting into the programmed computer through said input device data comprising the three-dimensional coordinates of at least a subset of the atoms of EGFR as set out in Table 2; providing a database of chemical and peptide structures stored in said computer data storage system; selecting from said database, using computer methods, structures having a portion that is structurally similar to said criteria data set; and outputting to said output device the selected chemical structures having a portion similar to said criteria data set.

[0019] In another aspect, the present invention provides a machine-readable medium having stored thereon a plurality of executable instructions to perform a method to identify a mimetic of cetuximab using a crystal of a receptor-antibody complex comprising a receptor-antibody complex of an epidermal growth factor receptor (EGFR) extracellular domain and cetuximab Fab, the method comprising: comparing a three-dimensional structure of a mimetic

with a three dimensional structure an epidermal growth factor receptor (EGFR) extracellular domain and cetuximab Fab having an X-ray crystallography resolution of better than about 5.0 Angstroms.

[0020] Preferably the EGFR coordinates comprise at least a subset of the atomic coordinates of Table 2. In one embodiment, identifying a mimetic comprises comparing the three-dimensional structure of a mimetic with a three-dimensional structure of at least one EGFR amino acid bound by cetuximab Fab. In another embodiment identifying a mimetic comprises comparing a three dimensional structure of a mimetic with the atomic coordinates of a region of EGFR selected from the group consisting of about amino acid residue 350 to about amino acid residue 354, about amino acid residue 380 to about amino acid residue 385, about amino acid residue 405 to about amino acid residue 420, about amino acid residue 435 to about amino acid residue 475 and combinations thereof.

[0021] In another aspect, the present invention provides a machine-readable medium having stored thereon a plurality of executable instructions to perform a method for identifying a mimetic of cetuximab, the method comprising: introducing *in silico* substitutions in at least a single CDR region of cetuximab to obtain a pool of variants; and using a computer and at least a subset of the EGFR coordinates provided in Table 2 to select a variant with improved EGFR binding characteristics.

[0022] In another aspect, the present invention provides a cetuximab mimetic identified by any of the above methods.

[0023] In another aspect, the present invention provides a method of inhibiting EGFR comprising administering the identified mimetic.

[0024] In another aspect, the present invention provides a method of treating a disease or condition associated with EGFR expression comprising administering the identified mimetic. In one non-limiting embodiment, the present invention provides a method of inhibiting growth of a tumor cell that expresses EGFR comprising administering the above identified mimetics. In another embodiment, the present invention provides a method of treating a hyperproliferative diseases stimulated by a ligand of EGFR.

[0025] In another aspect, the present invention provides a method of treating psoriasis comprising administering the above identified mimetics.

Brief Description of the Figures

[0026] Figure 1 provides pictures of the crystals of the present invention. In this figure crystals on the left (1a) are representative of those used to collect the data and solve the structure. On the right (1b) are examples of crystals grown from the same condition except without $CdCl_2$, which are substantially identical to that obtained in the presence of $CdCl_2$.

[0027] Figure 2 provides various characteristics of the crystals of the present invention.

[0028] Figure 3 provides crystal structures of EGFR and cetuximab Fab complex.

[0029] Figure 4 provides graphs depicting affinity of cetuximab Fab, and affinity of EGFR ligands for EGFR, and also provides a competition assay. Additional details are provided in the example below having the heading "BIAcore binding studies."

Detailed Description of the Invention

[0030] The present invention provides a co-crystal of EGFR extracellular domain and cetuximab Fab fragment with a resolution that is preferably greater than about 5Å, more preferably greater than about 4Å and most preferably greater than about 3Å. The crystal preferably has a space group $P2_1$ and unit cell dimensions of a = 77.8 Å, b = 70.9 Å, c = 147.1 Å; and $\beta = 102.5°$.

[0031] To obtain the crystal for which structural coordinates are shown Table 2, the entire extracellular region (*i.e.*, amino acids 1-618 of mature EGFR, including domains I, II, III and IV) is used, plus a C-terminal hexa-histidine tag (Ferguson, K.M. et al., 2000, Embo J 19, 4632-4643; Ferguson, K.M. et al., 2003, Mol Cell *11*, 507-517). (See GenBank Accession No. 1NQL.A). Cetuximab Fab contains the Fab fragment of Cetuximab, *i.e.*, the heavy and light chain variable region sequences of murine antibody M225 (U.S. App. Ser. No. 2004/0006212, incorporated herein by reference) with human IgG1 C_H1 heavy and kappa light chain constant domains. (Cetuximab includes all three IgG1 heavy chain constant domains.) The CDR regions of the heavy chain of Cetuximab have the following sequences: a CDR1 region with a sequence of N Y G V H, a CDR2 region with a sequence of V I W S G G N T D Y N T P F T S, and a CDR3 region with a sequence of A L T Y Y D Y E F A Y. The CDR regions of the light chain

of Cetuximab have the following sequences: a CDR1 region with a sequence of R A S Q S I G T N I H, a CDR2 region with a sequence of Y A S E S I S, and a CDR3 region with a sequence of Q Q N N N W P T T.

[0032] The sequences of the proteins in the crystal, *i.e.*, cetuximab Fab and the extracellular domain of EGFR, are also reported with the atomic coordinates of Table 2, except for amino acid positions at which the electron density map was insufficient to place all atoms of the actual amino acid side chain. At those positions, other amino acid side chains are designated.

[0033] Crystallization of the EGFR:cetuximab Fab complex may be carried out from a solution of cetuximab Fab and EGFR with various techniques, such as microbatch, hanging drop, sitting drop, sandwich drop, seeding and dialysis. The solution is prepared by combining EGFR extracellular domain with cetuximab Fab in a suitable buffer. A standard buffering agent such as Hepes, Tris, MES and acetate may be used. The buffer system may also be manipulated by addition of a salt such as sodium chloride, ammonium sulfate, sodium/potassium phosphate, ammonium acetate among others. Imidazole may also be used as a buffer. The concentration of the salt is preferably about 10mM to about 500mM, more preferably about 25 mM to about 100mM, and most preferably about 50mM. The pH of the buffer is preferably about 6 to about 8, more preferably about 7 to about 8. The concentration of the protein in the solution is preferably that of super-saturation to allow precipitation. The solution may optionally contain a protein stabilizing agent.

[0034] In one embodiment, the crystal is precipitated by contacting the solution with a reservoir that reduces the solubility of the proteins due to presence of precipitants, i.e., reagents that induce precipitation. Such contacting may be carried out through vapor diffusion. Examples of precipitants include ammonium sulfate, ethanol, 3-ethyl-2,4 pentanediol, and glycols, particularly polyethanol glycol (PEG). The PEG utilized preferably has a molecular weight of about 400 to about 20,000, more preferably about 3000 Da, with a concentration of about 10 % to about 20 % , more preferably about 15 % (w/v). Some precipitants may act by making the buffer pH unfavorable for protein solubility.

[0035] The temperature during crystallization is preferably of about 0°C to about 30°C, more preferably about 20°C to about 30°C, and most preferably about 25°C. In addition to

generation of structure, the crystallization technique of the invention may also be used to increase purity of proteins.

[0036] Precipitation may also be carried out in the presence of a heavy metal such as cadmium to further improve analysis of the crystal after precipitation.

[0037] In one embodiment illustrated in the example, about 0.5 µl (or microliter) protein at 11 mg/ml in 10 mM Hepes, 50 mM NaCl, pH 7.5 is contacted with 0.5 µl (or microliter) reservoir solution of about 15 % PEG 3350, about 250 mM ammonium sulfate, about 10 mM cadmium chloride, about 100 mM imidazole and about pH 7.5. Essentially the same crystals are obtained without use of cadmium chloride. Crystals have also been grown at 15 % PEG 3450, 100 mM $CaCl_2$, 50 mM Sodium acetate, pH 5.0 and 15 % PEG 3450, 100 mM ammonium acetate, 50 mM sodium citrate, pH 5.0.

[0038] The atomic coordinates of the crystal of the present invention are disclosed in Table 2. The coordinates provide a three dimensional structure of the EGFR extracellular domain:cetuximab Fab complex of the crystal. The cetuximab Fab includes the portion of cetuximab which binds to the extracellular region of EGFR, and can be used to model the interaction of cetuximab and EGFR. Accordingly, the crystal and the deduced atomic coordinates allows for studying the binding interaction of cetuximab with EGFR and EGFR inhibition. The three dimensional structure further allows for identifying potential mimetics by screening potential mimetics against at least part of the structure (a subset of atoms provided in Table 2).

[0039] The three dimensional structure of EGFR:cetuximab Fab complex as defined by atomic coordinates is obtained from the X-ray diffraction pattern of the crystal and the electron density map derived therefrom. One method for determining the three dimensional structure is by molecular replacement which involves use of the structure of a closely related molecule or receptor ligand complex. An alternative method employs heavy atom derivatives.

[0040] One of skill in the art will also appreciate that the atomic coordinates provided are not precise, but are obtained from electron density measured for the crystal. Initial coordinates are determined by matching the protein backbone and side chains to the electron density map. The coordinates are refined by minimizing the overall energy of the protein (*e.g.*,

by adjusting bond lengths and angles), in view of the determined electron density. In some locations in the atomic structure, atoms of amino acid side chains may not be fully resolved due to, for example, solvent interactions and the like. Accordingly, the side chain that is modeled may differ from the actual side chain at that amino acid position. For the atomic coordinates set forth in Table 2, Arg 18 of the light chain and Gln 1 of the heavy chain of cetuximab Fab are modeled as Alanine. The present invention encompasses structures having root mean square deviations of backbone atoms of not more than about 1.5 Å, or more preferably not more than about 1.0 Å, or most preferably, not more than about 0.5 Å for residues of EGFR extracellular domain or cetuximab Fab that are used in identifying mimetics. The present invention encompasses variations within acceptable standards of error in the art for a crystal with the resolution disclosed herein.

[0041] It will also be appreciated that the origin of the atomic coordinates is arbitrarily defined. Accordingly, the same atomic structure can be represented by sets of coordinates that are numerically different, but that identify the same atomic positions. The present invention encompasses such alternative coordinate sets.

[0042] Identification of mimetics of cetuximab may be carried out with only a subset of the coordinates provided, such as those of amino acid residues of EGFR or cetuximab Fab that are associated in the complex.

[0043] Potential mimetics are examined against EGFR, particularly one or more of the above residues, through the use of computer modeling using a docking program. Such computer modeling allows for obtaining a positive initial indication of binding before synthesis and testing of the compound. If the testing shows sufficient interaction, then the compound may be synthesized and tested as a potential candidate. There is no limitation to the source of potential mimetics. For example, potential mimetics include structural databases of small molecules and other ligands represented *in silico*, as well as commercially available libraries of small molecules that can be similarly modeled. Potential mimetics further include peptides and macromolecules such as proteins, polypeptides, preferably antibodies or antibody fragments, synthetic polymer backbones having amino acid-like functional groups, and the like. Such potential mimetics may have defined structure, or be modeled on the basis of their similarity to other macromolecules of known structure. Iterative methods may be employed to vary one or more of the functional

groups to improve the fit of the potential mimetic with EGFR. Those substances identified as mimetics, if not otherwise available to be tested for EGFR antagonist activity, may be synthesized.

[0044] In preferred embodiments, the locations of at least some atoms of cetuximab mimetics that contact EGFR correspond to the locations of atoms of cetuximab that contact EGFR. The correspondence is preferably within about 2.0 Å, more preferably within about 1.0 Å, and most preferably with about 0.5 Å. The atoms usually interact with EGFR in a manner similar to the corresponding atoms of cetuximab Fab (*i.e.*, polar, basic, acidic, hydrophobic). The mimetics may contain various numbers of such corresponding atoms, and binding of the mimetic to EGFR may be completely or only partially dependent on such corresponding interactions. In certain embodiments, such atomic interactions with EGFR may be supplemented by interactions of other atoms of the mimetic that also interact with EGFR. The binding ability of the mimetics can be evaluated by various computer programs as disclosed herein.

[0045] Docking may be accomplished by using software such as Quanta and Sybyl (manual model building software), followed by energy minimization and molecular dynamics with standard molecular mechanics force fields, such as CHARMM and AMBER. Specialized programs for docking include GRAM, GRID, Flexx, Glide, GOLD, MCSS, DOCK or AUTODOCK (*See e.g.* USP 5,856,116 and 6,087,478; Jorgensen W.L., 2004, Science 303, 1813-1818). Such procedure includes computer fitting of potential antagonists to EGFR to determine how the three dimensional structure of EGFR and the chemical properties of each amino acid interfere with EGFR activation, and to estimate attraction, repulsion and steric hindrance of the binding. Generally, tighter fits are preferred in that they are more likely to be effective when administered *in vivo*, and would be more selective for EGFR, minimizing binding to other receptors. Many of these programs also consider adsorption, distribution, metabolic and excretion characteristics of the molecules.

[0046] The docking program may be connected to a structure generator (such as SYNOPSIS) to perform *de novo* screening. An alternative to de novo screening, is creation of structures based on the binding site such as with programs including LUDI, SPROUT and

BOMB, which allow a user to put a substituent in a binding site and then build up the substituent (Jorgensen W.L., 2004).

[0047] One of skill in the art would appreciate that the above screening methods may also be carried out manually, by building an actual three dimensional model based on the coordinates, and then determining desirable antagonists based on that model visually.

[0048] Of particular interest for designing mimetics are those amino acids that overlap with the binding site of EGR or TGF-α to EGFR. Such binding may interfere with the ligand-induced dimerization of the receptor or inhibit binding of the ligand to EGFR altogether.

[0049] Domains I and III of EGFR are responsible for binding of EGF to the receptor, and are of interest in designing antagonists. Of the amino acids of EGFR, some are involved in direct hydrogen bonding with cetuximab Fab. These amino acids include Ser 468, Asn 469, Arg 353, Gln 384, Gln 408, Ser 418, Ser 440 and/or Lys 465. Ser468 and Asn 469 are involved in main-chain hydrogen bonds, *i.e.*, the nature of the side chain is not directly relevant. Antagonists may be designed to bind to a few, most or none of these amino acids. Other amino acids of EGFR are in contact to some lesser degree with cetuximab Fab. These amino acids include: Pro 349, Arg 353, Leu 382, His 409, Phe 412, Val 417, Ser 418, Ile 438, Gly 441, Lys 443, Ile 466, Ile 467, Gln 471 and Asn 473. Of the nine amino acids between 465 and 473, eight of them are in some contact with cetuximab Fab. This region of EGFR is also ideal for screening of antagonists, particularly since residues 467 and 468 are in contact with both the heavy and light chains of cetuximab.

[0050] Cetuximab Fab does not bind to amino acids at positions 325, 346, 348, 350, 354-357 and 411, despite these amino acids being involved in EGF/TGF-α binding. Screening may be carried out against these positions, or only for the positions bound by cetuximab Fab, or both. If screening is carried out based on the binding of cetuximab Fab to EGFR, such screening may be carried out in regions of amino acids of about 350 to about 354, amino acids of about 380 to about 385, amino acids of about 405 to about 420, amino acids of about 435 to about 475 and combinations thereof. One of skill in the art would appreciate that screening may simply be carried out against domains I and III of EGFR based on the crystal structure provided, and general area of the binding pocket, without focus on any particular amino acids bound by cetuximab Fab and/or ligands.

[0051] The mimetics, both peptides and small organic molecules, preferably antibody and antibody fragments, bind to EGFR and mimic effects of cetuximab both *in vivo* and *in vitro*. In addition to peptides and small organic molecules, the mimetic may be a sugar. The mimetic may also be a combination of peptides/small molecules/sugars, such as a peptide having a synthetic backbone. The mimetic may be designed based on criteria such as affinity for EGFR, desirable efficacy and/or desirable selectivity. These mimetics have at least a single physiological or binding activity of cetuximab, which activity can be tested by assays provided further below.

[0052] As used herein, "mimetics" include cetuximab mimetics with modifications that retain specificity for EGFR. Such modifications include, but are not limited to, conjugation to an effector molecule such as a chemotherapeutic agent (*e.g.*, cisplatin, taxol, doxorubicin) or cytotoxin (*e.g.*, a protein, or a non-protein organic chemotherapeutic agent). The mimetics can be modified by conjugation to detectable reporter moieties. Also included are mimetics with alterations that affect non-binding characteristics such as half-life (*e.g.*, pegylation).

[0053] Proteins and non-protein agents may be conjugated to the mimetics by methods that are known in the art. Conjugation methods include direct linkage, linkage via covalently attached linkers, and specific binding pair members (*e.g.*, avidin-biotin). Such methods include, for example, that described by Greenfield et al., Cancer Research 50, 6600-6607 (1990) for the conjugation of doxorubicin and those described by Arnon et al., Adv. Exp. Med. Biol. 303, 79-90 (1991) and by Kiseleva et al., Mol. Biol. (USSR)25, 508-514 (1991) for the conjugation of platinum compounds.

[0054] In one embodiment, a library of small organic molecules is used to screen for mimetics *in silico*. In another embodiment, cetuximab is used as a starting candidate, and varied to generate a cetuximab variant with desirable properties. Such variant of cetuximab may be a scFv, a Fab, diabody, or IgG. For example, conservative amino acid substitutions may be made at one or more of residues of cetuximab Fab which bind EGFR: light chain (LC) residues Asn 91, Trp 94; heavy chain (HC) residues Gly 54, Tyr 102, Trp 52, Asp 103.

[0055] A conservative amino acid substitution is defined as a change in the amino acid composition by way of changing one or two amino acids of a peptide, polypeptide or protein, or fragment thereof. The substitution is of amino acids with generally similar properties (*e.g.*,

acidic, basic, aromatic, size, positively or negatively charged, polarity, non-polarity) such that the substitutions do not substantially alter peptide, polypeptide or protein characteristics (*e.g.*, charge, isoelectric point, affinity, avidity, conformation, solubility) or activity. Typical substitutions that may be performed for such conservative amino acid substitution may be among the groups of amino acids as follows:
glycine (G), alanine (A), valine (V), leucine (L) and isoleucine (I);
aspartic acid (D) and glutamic acid (E);
alanine (A), serine (S) and threonine (T);
histidine (H), lysine (K) and arginine (R):
asparagine (N) and glutamine (Q);
phenylalanine (F), tyrosine (Y) and tryptophan (W).

[0056] If the binding is not as tight in regard to one or more of the residues, less conservative substitutions may be made at those residues to optimize the binding. For example, an amino acid with a hydrophilic group may be substituted for one with a hydrophobic group.

[0057] In one embodiment, a mixture of all or some amino acids is introduced to synthesize variants of cetuximab randomly at specified positions *in silico*: Tyr 102 (HC), Trp 52 (HC), and Asp 103 (HC) of cetuximab. Only these amino acid residues are involved in side chain hydrogen bonds, and thus are candidates for specific mutations aimed at modifying direct interactions. Such variation, where all 20 amino acids are used, would result in about 20^3 variants which can then be screened. If only conservative substitutions are made, the variation would be much less, about 3^3. Conservative and non-conservative substitutions at other positions in the CDRs of cetuximab that do not bind to EGFR directly should also be considered. For example, direct interactions between contact residues (*e.g.*, main chain - main chain, main chain - side chain, side chain - side chain contacts) can be modified by introducing changes at amino acid positions that affect the position of cetuximab side chain and main chain atoms involved in direct interactions with EGFR. In one embodiment, at most a single substitution is made in each CDR. In another embodiment a single substitution is made in the heavy chain CDR3 region of cetuximab.

[0058] After such screening and selection, the selected mimetic may be synthesized, and various assays carried out to measure the biological or physiological activity of the mimetic to

select an EGFR antagonist. A preferred EGFR antagonist has one or more of the following properties: inhibits EGFR tyrosine kinase activity; blocks ligand binding to EGFR; inhibits EGFR dimerization (homodimerization with EGFR or heterodimerization with another EGFR family receptor subunit); inhibits EGFR substrate phosphorylation; inhibits EGFR mediated gene activation; inhibits growth or proliferation of a cell the expresses EGFR. Preferably, the antagonist has substantially similar or improved effectiveness as an EGFR antagonist as compared to Cetuximab.

[0059] Tyrosine kinase inhibition can be determined using well-known methods; for example, by measuring the autophosphorylation level of recombinant kinase receptor, and/or phosphorylation of natural or synthetic substrates. Thus, phosphorylation assays are useful in determining EGFR antagonists of the present invention. Phosphorylation can be detected, for example, using an antibody specific for phosphotyrosine in an ELISA assay or on a western blot. Some assays for tyrosine kinase activity are described in Panek et al., J. Pharmacol. Exp. Thera. (1997) 283: 1433-44 and Batley et al., Life Sci. (1998) 62: 143-50.

[0060] In addition, methods for detection of protein expression can be utilized to determine EGFR antagonists, wherein the proteins being measured are regulated by EGFR tyrosine kinase activity. These methods include immunohistochemistry (IHC) for detection of protein expression, fluorescence in situ hybridization (FISH) for detection of gene amplification, competitive radioligand binding assays, solid matrix blotting techniques, such as Northern and Southern blots, reverse transcriptase polymerase chain reaction (RT-PCR) and ELISA. See, *e.g.*, Grandis et al., Cancer, (1996) 78:1284-92; Shimizu et al., Japan J. Cancer Res., (1994) 85:567-71; Sauter et al., Am. J. Path., (1996) 148:1047-53; Collins, Glia, (1995) 15:289-96; Radinsky et al., Clin. Cancer Res., (1995) 1:19-31; Petrides et al., Cancer Res., (1990) 50:3934-39; Hoffmann et al., Anticancer Res., (1997) 17:4419-26; Wikstrand et al., Cancer Res., (1995) 55:3140-48.

[0061] The ability of a mimetic to block ligand binding can be measured, for example, by an *in vitro* competitive assay such as is illustrated in Figure 4. In this assay, a ligand of EGFR such as EGF is immobilized, and a binding assay is carried to determine the effectiveness of the mimetic to competitively inhibit binding of EGFR to the immobilized ligand.

[0062] *In vivo* assays can also be utilized to determine EGFR antagonists. For example, receptor tyrosine kinase inhibition can be observed by mitogenic assays using cell lines stimulated with receptor ligand in the presence and absence of inhibitor. For example, A431cells (American Type Culture Collection (ATCC), Rockville, MD) stimulated with EGF can be used to assay EGFR inhibition. Another method involves testing for inhibition of growth of EGFR-expressing tumor cells, using for example, human tumor cells injected into a mouse. See U.S. Patent No. 6,365,157 (Rockwell et al.).

[0063] The present invention provides for coordinates of the co-crystal of the present invention on a computer readable format such as a magnetic disk, CD-ROM or a hard drive.

[0064] In another aspect, the present invention provides methods of treating EGFR-dependent diseases and conditions in mammals by administering a therapeutically effective amount of a mimetic of cetuximab. One skilled in the art would easily be able to diagnose such conditions and disorders using known, conventional tests. Treatment means any treatment of a disease in an animal and includes: (1) preventing the disease from occurring in a mammal which may be predisposed to the disease but does not yet experience or display symptoms of the disease; *e.g.*, prevention of the outbreak of the clinical symptoms; (2) inhibiting the disease, *e.g.*, arresting its development; or (3) relieving the disease, *e.g.*, causing regression of the symptoms of the disease. Therapeutically effective amount for the treatment of a disease means that amount which, when administered to a mammal in need thereof, is sufficient to effect treatment, as defined above, for that disease. A cetuximab mimetic of the invention may be administered with an antineoplastic agent such as, for example, a chemotherapeutic.

[0065] Cetuximab mimetics of the present invention are useful for treating tumors that express EGFR. EGFR expressing tumors are characteristically sensitive to EGF present in their environment, and can further be stimulated by tumor produced EGF or TGF-α. While not intending to be bound to any particular mechanism, the diseases and conditions that may be treated or prevented by the present methods include, for example, those in which tumor growth is stimulated through an EGFR paracrine and/or autocrine loop. The method is therefore effective for treating a solid tumor that is not vascularized, or is not yet substantially vascularized.

[0066] In another aspect of the invention, cetuximab mimetics are used to inhibit tumor-associated angiogenesis. EGFR stimulation of vascular endothelium is associated with vascularization of tumors. Typically, vascular endothelium is stimulated in a paracrine fashion by EGF and/or TGF-α from other sources (*e.g.*, tumor cells). Accordingly, the cetuximab mimetics are effective for treating subjects with vascularized tumors or neoplasms.

[0067] Tumors that may be treated include primary tumors and metastatic tumors, as well as refractory tumors. Refractory tumors include tumors that fail to respond or are resistant to treatment with chemotherapeutic agents alone, antibodies alone, radiation alone or combinations thereof. Refractory tumors also encompass tumors that appear to be inhibited by treatment with such agents, but recur up to five years, sometimes up to ten years or longer after treatment is discontinued. The tumors may express EGFR at normal levels or they may overexpress EGFR at levels, for example, that are at least 10, 100, or 1000 times normal levels.

[0068] Examples of tumor that express EGFR and are stimulated by a ligand of EGFR include carcinomas, gliomas, sarcomas, adenocarcinomas, adenosarcomas, and adenomas. Such tumors can occur in virtually all parts of the body, including, for example, breast, heart, lung, small intestine, colon, spleen, kidney, bladder, head and neck, ovary, prostate, brain, pancreas, skin, bone, bone marrow, blood, thymus, uterus, testicles, cervix or liver. Some tumors observed to overexpress EGFR that may be treated according to the present invention include, but are not limited to, colorectal and head and neck tumors, especially squamous cell carcinoma of the head and neck, brain tumors such as glioblastomas, and tumors of the lung, breast, pancreas, esophagus, bladder, kidney, ovary, cervix, and prostate. Non-limiting examples of tumors observed to have constitutively active (i.e., unregulated) receptor tyrosine kinase activity include gliomas, non-small-cell lung carcinomas, ovarian carcinomas and prostate carcinomas. Other examples of tumors include Kaposi's sarcoma, CNS neoplasms, neuroblastomas, capillary hemangioblastomas, meningiomas and cerebral metastases, melanoma, gastrointestinal and renal carcinomas and sarcomas, rhabdomyosarcoma, glioblastoma, preferably glioblastoma multiforme, and leiomyosarcoma.

[0069] The present invention also provides a method of treating a non-cancer hyperproliferative disease in a mammal comprising administering to the mammal an effective amount of the antibody of the present invention. As disclosed herein, "hyperproliferative

disease" is defined as a condition caused by excessive growth of non-cancer cells that express a member of the EGFR family of receptors. The excess cells generated by a hyperproliferative disease express EGFR at normal levels or they may overexpress EGFR.

[0070] The types of hyperproliferative diseases that can be treated in accordance with the invention are any hyperproliferative diseases that are stimulated by a ligand of EGFR or mutants of such ligands. Examples of hyperproliferative disease include psoriasis, actinic keratoses, and seborrheic keratoses, warts, keloid scars, and eczema. Also included are hyperproliferative diseases caused by virus infections, such as papilloma virus infection. For example, psoriasis comes in many different variations and degrees of severity. Different types of psoriasis display characteristics such as pus-like blisters (pustular psoriasis), severe sloughing of the skin (erythrodermic psoriasis), drop-like dots (guttae psoriasis) and smooth inflamed lesions (inverse psoriasis). The treatment of all types of psoriasis (e. g., psoriasis vulgaris, psoriasis pustulosa, psoriasis erythrodermica, psoriasis arthropathica, parapsoriasis, palmoplantar pustulosis) is contemplated by the invention.

[0071] Administering the cetuximab mimetic includes delivering the mimetic to a mammal by any method that may achieve the result sought. The term mammal as used herein is intended to include, but is not limited to, humans, laboratory animals, domestic pets and farm animals. The mimetic may be administered, for example, orally, parenterally (intravenously or intramuscularly), topically, transdermally or by inhalation. Topical administration may be preferred for certain hyperproliferative disorders.

[0072] In an embodiment of the invention, cetuximab mimetic can be administered in combination with one or more other anti-neoplastic agents, such as chemotherapeutic agents. Radiation can also be employed. For examples of combination therapies, see, *e.g.*, U.S. Patent No. 6,217,866 (Schlessinger et al.) (Anti-EGFR antibodies in combination with anti-neoplastic agents); WO 99/60023 (Waksal et al.) (Anti-EGFR antibodies in combination with radiation). Any suitable anti-neoplastic agent can be used, such as a chemotherapeutic agent, radiation or combinations thereof. The anti-neoplastic agent can be an alkylating agent or an anti-metabolite. Examples of alkylating agents include, but are not limited to, cisplatin, cyclophosphamide, melphalan, and dacarbazine. Examples of anti-metabolites include, but not limited to, doxorubicin, daunorubicin, paclitaxel, irinotecan (CPT-11), and topotecan. When the

agent is radiation, the source of the radiation can be either external (external beam radiation therapy – EBRT) or internal (brachytherapy – BT) to the patient being treated. The dosage administered depends on numerous factors, including, for example, the type of agent, the type and severity tumor being treated and the route of administration of the agent. It should be emphasized, however, that the present invention is not limited to any particular dose.

[0073] For treatment of hyperproliferative disease, the cetuximab mimetic can be combined with any conventional treatment agent. For example, when the hyperproliferative disease is psoriasis, there are a variety of conventional systemic and topical agents available. Systemic agents for psoriasis include methotrexate, and oral retinoids, such as acitretin, etretinate, and isotretinoin. Other systemic treatments of psoriasis include hydroxyurea, NSAIDS, sulfasalazine, and 6-thioguanine. Antibiotics and antimicrobials can be used to treat or prevent infection that can cause psoriasis to flare and worsen. Topical agents for psoriasis include anthralin, calcipotriene, coal tar, corticosteroids, retinoids, keratolytics, and tazarotene. Topical steroids are one of the most common therapies prescribed for mild to moderate psoriasis. Topical steroids are applied to the surface of the skin, but some are injected into the psoriasis lesions.

[0074] Hyperproliferative disease treatments further include administration of the cetuximab mimetic in combination with phototherapy. Phototherapy includes administration of any wavelength of light that reduces symptoms of the hyperproliferative disease, as well as photoactivation of a chemotherapeutic agent (photochemotherapy). For further discussion of treatment of hyperproliferative disorders, see WO 02/11677 (Teufel et al.) (Treatment of hyperproliferative diseases with epidermal growth factor receptor antagonists).

[0075] In certain embodiments of the invention, cetuximab mimetics of the invention can be administered with EGFR antagonists and/or antagonists of other receptors involved in tumor growth or angiogenesis. The receptor antagonists may bind to the receptor or the ligand to block receptor-ligand binding, or the receptor antagonists may otherwise neutralize the receptor tyrosine kinase. Ligands of EGFR include, for example, EGF, TGF-α amphiregulin, heparin-binding EGF (HB-EGF) and betacellulin. EGF and TGF-α are thought to be the main endogenous ligands that result in EGFR-mediated stimulation, although TGF-α has been shown

to be more potent in promoting angiogenesis. Accordingly, EGFR antagonists include antibodies that bind to such ligands and thereby block binding to and activation of EGFR.

[0076] The cetuximab mimetic can be used in combination with a VEGFR antagonist. In one embodiment of the invention, a cetuximab mimetic is used in combination with a receptor antagonist that binds specifically to VEGFR-2/KDR receptor (PCT/US92/01300, filed Feb. 20, 1992; Terman et al., Oncogene 6: 1677-1683 (1991)). In another embodiment of the invention, a cetuximab mimetic is used in combination with a receptor antagonist that binds specifically to VEGFR-1/Flt-1 receptor (Shibuya M. et al., Oncogene 5, 519-524 (1990)). In another embodiment, a cetuximab mimetic is used in combination with a receptor antagonist that binds to a VEGFR ligand. For example, Avastin® (bevacizumab) is an antibody that binds VEGF. Particularly preferred are antigen-binding proteins that bind to the extracellular domain of VEGFR-1 or VEGFR-2 and block binding by ligand (VEGF or PlGF), and/or neutralize VEGF-induced or PlGF-induced activation. For example, Mab IMC-1121 binds to soluble and cell surface-expressed KDR. Mab IMC-1121 comprises the V_H and V_L domains obtained from a human Fab phage display library. (See WO 03/075840) In another example, ScFv 6.12 binds to soluble and cell surface-expressed Flt-1. ScFv 6.12 comprises the V_H and V_L domains of mouse monoclonal antibody MAb 6.12. A hybridoma cell line producing MAb 6.12 has been deposited as ATCC number PTA-3344.

[0077] In another embodiment, a cetuximab mimetic is administered with an antagonist of insulin-like growth factor receptor (IGFR). In certain tumor cells, inhibition of EGFR function can be compensated by upregulation of other growth factor receptor signaling pathways, and particularly by IGFR stimulation. Further, inhibition of IGFR signaling results in increased sensitivity of tumor cells to certain therapeutic agents. Stimulation of either EGFR or IGFR results in phosphorylation of common downstream signal transduction molecules, including Akt and p44/42, although to different extents. Accordingly, in an embodiment of the invention, an IGFR antagonist (*e.g.*, an antibody that binds to IGF or IGFR and neutralizes the receptor) is coadministered with a cetuximab mimetic of the invention, thereby blocking a second input into the common downstream signaling pathway (*e.g.*, inhibiting activation of Akt and/or p44/42). An example of a human antibody specific for IGFR is IMC-A12 (See WO 2005/016970).

[0078] Other examples of growth factor receptors involved in tumorigenesis against which antagonists may be directed are the receptors for platelet-derived growth factor (PDGFR), hepatocyte growth factor (HGFR), nerve growth factor (NGFR), fibroblast growth factor (FGFR), and macrophage stimulating protein (RON).

[0079] The cetuximab mimetics can also be administered with intracellular RTK antagonists that inhibit activity of RTKs or their associated downstream signaling elements that are involved in tumor growth or tumor-associated angiogenesis. The intracellular RTK antagonists are preferably small molecules. Some examples of small molecules include organic compounds, organometallic compounds, salts of organic compounds and organometallic compounds, and inorganic compounds. Atoms in a small molecule are linked together via covalent and ionic bonds; the former is typical for small organic compounds such as small molecule tyrosine kinase inhibitors and the latter is typical of small inorganic compounds. The arrangement of atoms in a small organic molecule may represent a chain, *e.g.* a carbon-carbon chain or carbon-heteroatom chain or may represent a ring containing carbon atoms, *e.g.* benzene or a policyclic system, or a combination of carbon and heteroatoms, *i.e.*, heterocycles such as a pyrimidine or quinazoline. Although small molecules can have any molecular weight, they generally include molecules that would otherwise be considered biological molecules, except their molecular weight is not greater than 650 D. Small molecules include both compounds found in nature, such as hormones, neurotransmitters, nucleotides, amino acids, sugars, lipids, and their derivatives as well as compounds made synthetically, either by traditional organic synthesis, bio-mediated synthesis, or a combination thereof. *See e.g.* Ganesan, *Drug Doscov. Today* 7(1): 47-55 (Jan. 2002); Lou, *Drug Discov. Today*, 6(24): 1288-1294 (Dec. 2001).

[0080] More preferably, the small molecule to be used as an intracellular RTK antagonist according to the present invention is an intracellular EGFR antagonist that competes with ATP for binding to EGFR's intracellular binding region having a kinase domain or to proteins involved in the signal transduction pathways of EGFR activation. Examples of such signal transduction pathways include the ras-mitogen activated protein kinase (MAPK) pathway, the phosphatidylinosital-3 kinase (PI3K)-Akt pathway, the stress-activated protein kinase (SAPK) pathway, and the signal transducers and activators of transcription (STAT) pathways. Non-limiting examples of proteins involved in such pathways (and to which a small molecule

EGFR antagonist according to the present invention can bind) include GRB-2, SOS, Ras, Raf, MEK, MAPK, and matrix metalloproteinases (MMPs).

[0081] One example of a small molecule EGFR antagonist is IRESSA™ (ZD1939), which is a quinozaline derivative that functions as an ATP-mimetic to inhibit EGFR. *See* U.S. Patent No. 5,616,582 (Zeneca Limited); WO 96/33980 (Zeneca Limited) at p. 4; *see also*, Rowinsky *et al.*, Abstract 5 presented at the 37th Annual Meeting of ASCO, San Francisco, CA, 12-15 May 2001; Anido *et al.*, Abstract 1712 presented at the 37th Annual Meeting of ASCO, San Francisco, CA, 12-15 May 2001. Another example of a small molecule EGFR antagonist is TARCEVA™ (OSI-774), which is a 4-(substitutedphenylamino)quinozaline derivative [6,7-Bis(2-methoxy-ethoxy)-quinazolin-4-yl]- (3-ethynyl-phenyl)amine hydrochloride] EGFR inhibitor. *See* WO 96/30347 (Pfizer Inc.) at, for example, page 2, line 12 through page 4, line 34 and page 19, lines 14-17. *See also* Moyer *et al.*, *Cancer Res.*, 57: 4838-48 (1997); Pollack *et al.*, *J. Pharmacol.*, 291: 739-48 (1999). TARCEVA™ may function by inhibiting phosphorylation of EGFR and its downstream PI3/Akt and MAP (mitogen activated protein) kinase signal transduction pathways resulting in p27-mediated cell-cycle arrest. *See* Hidalgo *et al.*, Abstract 281 presented at the 37th Annual Meeting of ASCO, San Francisco, CA, 12-15 May 2001.

[0082] Other small molecules are also reported to inhibit EGFR, many of which are thought to being to the tyrosine kinase domain of an EGFR. Some examples of such small molecule EGFR antagonists are described in WO 91/116051, WO 96/30347, WO 96/33980, WO 97/27199 (Zeneca Limited). WO 97/30034 (Zeneca Limited), WO 97/42187 (Zeneca Limited), WO 97/49688 (Pfizer Inc.), WO 98/33798 (Warner Lambert Company), WO 00/18761 (American Cyanamid Company), and WO 00/31048 (Warner Lambert Company). Examples of specific small molecule EGFR antagonists include Cl-1033 (Pfizer), which is a quinozaline (N-[4-(3-chloro-4-fluoro-phenylamino)-7-(3-morpholin-4-yl-propoxy)-quinazolin-6-yl]-acrylamide) inhibitor of tyrosine kinases, particularly EGFR and is described in WO 00/31048 at page 8, lines 22-6; PKI166 (Novartis), which is a pyrrolopyrimidine inhibitor of EGFR and is described in WO 97/27199 at pages 10-12; GW2016 (GlaxoSmithKline), which is an inhibitor of EGFR and HER2; EKB569 (Wyeth), which is reported to inhibit the growth of tumor cells that overexpress EGFR or HER2 *in vitro* and *in vivo*; AG-1478 (Tryphostin), which is a quinazoline small molecule that inhibits signaling from both EGFR and erbB-2; AG-1478 (Sugen), which is bisubstrate inhibitor that also inhibits protein kinase CK2; PD 153035 (Parke-Davis) which is

reported to inhibit EGFR kinase activity and tumor growth, induce apoptosis in cells in culture, and enhance the cytotoxicity of cytotoxic chemotherapeutic agents; SPM-924 (Schwarz Pharma), which is a tyrosine kinase inhibitor targeted for treatment of prostrate cancer; CP-546,989 (OSI Pharmaceuticals), which is reportedly an inhibitor of angiogenesis for treatment of solid tumors; ADL-681, which is a EGFR kinase inhibitor targeted for treatment of cancer; PD 158780, which is a pyridopyrimidine that is reported to inhibit the tumor growth rate of A4431 xenografts in mice; CP-358,774, which is a quinzoline that is reported to inhibit autophosphorylation in HN5 xenografts in mice; ZD1839, which is a quinzoline that is reported to have antitumor activity in mouse xenograft models including vulvar, NSCLC, prostrate, ovarian, and colorectal cancers; CGP 59326A, which is a pyrrolopyrimidine that is reported to inhibit growth of EGFR-positive xenografts in mice; PD 165557 (Pfizer); CGP54211 and CGP53353 (Novartis), which are dianilnophthalimides. Naturally derived EGFR tyrosine kinase inhibitors include genistein, herbimycin A, quercetin, and erbstatin.

[0083] Further small molecules reported to inhibit EGFR and that are therefore within the scope of the present invention are tricyclic compounds such as the compounds described in U.S. Patent No. 5,679,683; quinazoline derivatives such as the derivatives described in U.S. Patent No. 5,616,582; and indole compounds such as the compounds described in U.S. Patent No. 5,196,446.

[0084] In another embodiment, the EGFR antagonist can be administered in combination with one or more suitable adjuvants, such as, for example, cytokines (IL-10 and IL-13, for example) or other immune stimulators, such as, but not limited to, chemokine, tumor-associated antigens, and peptides. See, *e.g.*, Larrivée et al., supra. It should be appreciated, however, that administration of only a cetuximab mimetic is sufficient to prevent, inhibit, or reduce the progression of the tumor in a therapeutically effective manner.

[0085] For combination therapies, the cetuximab mimetic and anti-neoplastic agent or receptor antagonist may be administered concomitantly or sequentially.

[0086] This invention also provides a pharmaceutical composition/formulation containing a cetuximab mimetic and a pharmaceutically acceptable carrier. Carrier as used herein include pharmaceutically acceptable carriers, excipients, or stabilizers which are nontoxic to the cell or mammal being exposed thereto at the dosages and concentrations employed. Often

the physiologically acceptable carrier is an aqueous pH buffered solution. Examples of physiologically acceptable carriers include buffers such as phosphate, citrate and other organic acids; antioxidants including ascorbic acid; low molecular weight (less than about 10 residues) polypeptide; proteins, such as serum albumin, gelatin; hydrophilic polymers such as polyvinylpyrrolidone; amino acids such as glycine, glutamine, asparagine, arginine or lysine; monosaccharides, disaccharides, and other carbohydrates including glucose, mannose, or dextrins; chelating agents such as EDTA; sugar alcohols such as mannitol or sorbitol; salt forming counterions such as sodium; and/or nonionic surfactants such as TWEEN®, polyethylene glycol (PEG), and PLURONICS®.

[0087] The active ingredients may also be entrapped in microcapsules prepared, for example, by interfacial polymerization, for example, hydroxymethylcellulose or gelatin-microcapsules and poly(methylmethacylate) microcapsules, respectively, in colloidal drug delivery systems (for example, liposomes, albumin microspheres, microemulsions, nano-particles, and nanocapsules) or in macroemulsions. The formulations to be used for *in vivo* administration must be sterile. This is readily accomplished by filtration through sterile filtration membranes. Sustained-release preparations may be prepared. Suitable examples of sustained-release preparations include semipermeable matrices of solid hydrophobic polymers containing the antibody, which matrices are in the form of shaped articles, *e.g.*, films, or microcapsules. Examples of sustained-release matrices include polyesters, hydrogels (for example, poly(2-hydroxyethyl-methacrylate), or poly(vinylalcohol)), polylactides (U.S. Pat. No. 3,773,919), copolymers of L-glutamic acid and γ- ethyl-L-glutamate, non-degradable ethylene-vinyl acetate, degradable lactic acid-glycolic acid copolymers such as the LUPRON DEPOT® (injectable microspheres composed of lactic acid-glycolic acid copolymer and leuprolide acetate), and poly-D-(-)-3-hydroxybutyric acid. While polymers such as ethylene-vinyl acetate and lactic acid-glycolic acid enable release of molecules for over 100 days, certain hydrogels release proteins for shorter time periods.

[0088] The present invention also includes kits for inhibiting tumor growth and/or tumor-associated angiogenesis comprising a therapeutically effective amount of a cetuximab mimetic. The kits can further contain any suitable antagonist of, for example, another growth factor receptor involved in tumorigenesis or angiogenesis (*e.g.*, VEGFR-1/Flt-1, VEGFR-2, PDGFR, IGFR, NGFR, FGFR, etc, as described above). Alternatively, or in addition, the kits of

the present invention can further comprise an anti-neoplastic agent. Examples of suitable anti-neoplastic agents in the context of the present invention have been described herein. The kits of the present invention can further comprise an adjuvant; examples have also been described above.

[0089] Moreover, included within the scope of the present invention is use of the present antibodies *in vivo* and *in vitro* for investigative or diagnostic methods, which are well known in the art. The diagnostic methods include kits, which contain mimetics of the present invention.

[0090] Accordingly, the mimetics can be used *in vivo* and *in vitro* for investigative, diagnostic, prophylactic, or treatment methods, which are well known in the art. Of course, it is to be understood and expected that variations in the principles of invention herein disclosed can be made by one skilled in the art and it is intended that such modifications are to be included within the scope of the present invention.

[0091] All references mentioned herein are incorporated by reference.

EXAMPLES

[0092] The following examples are offered for illustrative purposes only, and are not intended to limit the scope of the present invention in any way.

[0093] **Protein expression and purification.** sEGFR was produced and purified from baculovirus-infected Sf9 cells as described by Ferguson, K.M. et al., 2000, Embo J 19, 4632-4643, and was used without modification of its glycosylation state. This sEGFR was further purified by size exclusion chromatography (SEC) using a SEC250 column (BioRad) pre-equilibrated with 25 mM HEPES, 100 mM NaCl, pH 7.5 and concentrated to 6.2 mg/ml. Cetuximab Fab fragment was prepared by treatment of the IgG protein with papain. The IgG protein (20 mg/ml) was incubated with papain (1:1000 w:w) at 37°C for one hour and the digestion was terminated by addition of iodoacetemide (75 mM final concentration). The reaction mixture was loaded onto a Protein-A column and the flow-through fraction containing the Fab fragments was collected and concentrated. The cetuximab Fab was fractionated by SEC and mixed with sEGFR to give a two fold molar excess of Fab over sEGFR. Excess Fab was separated from the sEGFR:Fab complex using the same SEC column. The peak fractions

containing the sEGFR:Fab complex (as confirmed by SDS-PAGE), were concentrated to 11 mg/ml.

[0094] **Crystallization and data collection.** The sEGFR:Fab complex was buffer-exchanged into 25mM HEPES, pH 7.5, containing 50mM NaCl, and crystallized by the hanging drop method from a drop containing equal parts of a 78 μM sEGFR:Fab complex solution and reservoir solution of 15 % PEG3350, 250 mM $(NH_4)_2SO_4$, 100 mM imidazole, 10 mM $CdCl_2$, pH 7.5. Streak seeding was used to produce large (0.08 X 0.08 X 0.6 mm) single crystals. Crystals were cryo-stabilized with a brief exposure to 15 % PEG3350, 15 % Ethylene Glycol, 250 mM $(NH_4)_2SO_4$, 100 mM imidazole, 10 mM $CdCl_2$, pH 7.5, and were flash frozen in liquid nitrogen. Data were collected at CHESS beamline A1, using an ADSC Quantum-210 CCD detector, and were processed using HKL2000 (See, Otwinowski, Z., and Minor, W. (1997). Processing of X-ray Diffraction Data Collected in Oscillation Mode. In Macromolecular Crystallography, Volume 276, C.W. Carter Jr. and R.M. Sweet, eds. (New York: Academic Press), pp. 307-326.

[0095] **Structure determination and refinement.** Search models for molecular replacement were derived from the coordinates of tethered sEGFR (pdb id. 1NQL; Ferguson, K.M. et al., 2003) and those of the structure of the Fab fragment alone (P. Jeffrey and P. Kussie unpublished data). An initial solution was found for a domain I/II fragment (amino acids 5 – 240) combined with a domain III fragment of sEGFR using the dyad option of MOLREP (The CCP4 Suite: Programs for Protein Crystallography. Acta Cryst. *D50*, 760-763 (1990)) to search for the best relative orientation of these two fragments. With the solution for these fragments fixed it was possible to find a solution for the Fab fragment. Rigid body refinement with CNS was used to optimize the orientation of the individual sub-domains of the Fab. Following several rounds of model building using 'O' (Jones, T.A. et al., 1991, Acta Crystallogr A *47 (Pt 2)*, 110-119) and refinement using CNS (Brunger, A.T. et al., 1998, Acta Crystallogr D Biol Crystallogr *54 (Pt 5)*, 905-921), interpretable density for the remaining portions of sEGFR (C-terminal part of domain II and domain IV) could be seen in composite simulated-annealing omit-maps (calculated with CNS). The final stages of refinement employed TLS refinement (Winn, M.D. et al., 2001, Acta Crystallogr D Biol Crystallogr *57*, 122-133) with anisotropic motion tensors refined for each of the four domains of sEGFR and each of the domains of the

Fab, using REFMAC5 (The CCP4 Suite: Programs for Protein Crystallography. Acta Cryst. *D50*, 760-763 (1990).

[0096] **BIAcore binding studies.** Surface plasmon resonance binding experiments, performed using a BIAcore 3000 instrument, were performed in 10mM Hepes buffer, pH 8.0, that contained 150mM NaCl, 3mM EDTA, and 0.005% Tween 20 (HBS-EP8) at 25°C. EGF-agonists (200 μg/ml) were coupled to a CM5 BIAcore sensor chip using standard amine coupling. Optimal coupling was obtained in 10 mM sodium acetate at pH 4.0 for EGF and TGFα and at pH 6.0 for HB-EGF. Binding of sEGFR to these immobilized ligands was performed and analyzed exactly as described in Ferguson, K.M. et al., 2000 (Figure 4c). The Fab fragment of cetuximab was coupled to a separate sensor chip using amine coupling. The Fab was diluted to 50 μg/ml in 10 mM sodium acetate at pH 5.5 and passed over the activated surface for 5 minute at a flow rate 10 μl/minute. The binding of sEGFR to this surface was determined exactly as for sEGFR binding to immobilized EGF (Ferguson, K.M. et al., 2000) with the following modifications; a long contact time was used (10 μl/min for 20 minutes; 200 μl injection) to ensure that equilibrium was reached in binding of sEGFR to the surface even at low concentration, the surface was regenerated between data points with two 5 μl injections of 10 mM glycine, 1M NaCl (pH 3.0) to rapidly remove residual bound sEGFR. This regeneration does not impair the binding of sEGFR to the Fab; the observed response for a control sEGFR sample is constant over multiple cycles of binding and regeneration (Figure 4(a)).

[0097] The effect of added Fab upon the binding of sEGFR to immobilized ligand was determined using the same EGF-agonist chip described above. A series of samples were prepared that contained 600 nM sEGFR and increasing amounts of Fab. The fraction of the maximal response in the absence of added Fab is plotted for each ligand **(Figure 4(b)).**

[0098] **EGFR:Cetuximab Fab Interface.** The following amino acids are involved in direct hydrogen bonds with the Fab (3.25 Å cut-off, calculated using the program CONTACT (CCP4)):

sEGFR	Cetuximab* Light Chain	Cetuximab* Heavy Chain	Type
Ser 468	Asn 91		Main chain – main chain
Asn 469	Trp 94		Main chain – main chain
Arg 353		Gly 54	Side chain – main chain
Gln 384		Tyr 102	Side chain – side chain
Gln 408		Tyr 102	Side chain – side chain
Ser 418		Trp 52	Side chain – side chain
Ser 440		Tyr 102	Side chain – main chain
Lys 465		Asp 103	Side chain – side chain

*amino acids in the Fab are numbered in a simple sequential manner.

Additional amino acids that are close (4 Å cut-off) are shown on the following sequence.

```
   310         320         330         340         350         360
B1 RKVCNGIGIG EFKDSLSINA TNIKHFKNCT SISGDLHILP VAFRGDSFTH TPPLDPQELD

   370         380         390         400         410         420
   ILKTVKEITG FLLIQAWPEN RTDLHAFENL EIIRGRTKQH GQFSLAVVSL NITSLGLRSL

   430         440         450         460         470
   KEISDGDVII SGNKNLCYAN TINWKKLFGT SGQKTKIISN RGENSCKA
```

Bold	Fab Heavy chain
Underlined and Italic	Fab Light chain
Italic	Both chains of Fab

The binding site for cetuximab Fab is partially over-lapping with the ligand binding site. The following amino acids are involved in contact to TGFα or EGF, as reported by Garrett *et al.* and Ogiso *et al.*

```
   310         320         330         340         350         360
B1 RKVCNGIGIG EFKDSLSINA TNIKHFKNCT SISGDLHILP VAFRGDSFTH TPPLDPQELD

   370         380         390         400         410         420
   ILKTVKEITG FLLIQAWPEN RTDLHAFENL EIIRGRTKQH GQFSLAVVSL NITSLGLRSL

   430         440         450         460         470
   KEISDGDVII SGNKNLCYAN TINWKKLFGT SGQKTKIISN RGENSCKA
```

Underlined EGF/TGFα

Table 1. Data collection and refinement statistics

Data Collection Statistics[a]	
Space group	$P2_1$
Unique cell dimensions	a = 77.8 Å, b = 70.9 Å, c = 147.1 Å; β = 102.5°
X-ray source	CHESS A1
Resolution limit	2.8Å
Observed/unique	1411,255/38,478
Completeness	99.8 (90.6)
R_{sym}[b]	0.03 (0.33)
<I/σ>	17 (5.6)
Refinement Statistics	
Resolution limits	500-2.8Å
No. of reflections/no. test set	38098/1900
R factor (R_{free})[c]	0.22 (0.27)
Model	
Protein	sEGFR - aa 1-614 Fab: Light chain; aa 1-211, Heavy Chain; aa 1-220, 25 saccharide units
Total number of atoms	8131
RMSD bond lengths (Å)	0.028 Å
RMSD bond angles (°)	2.63°

a Numbers in parentheses refer to last resolution shell

b $R_{sym} = \Sigma|I_h - \langle I_h \rangle|/\Sigma I_h$, where $\langle I_h \rangle$ = average intensity over symmetry equivalent measurements

c R factor = $\Sigma||F_o| - |F_c||/\Sigma|F_o|$, where summation is over data used in the refinement; R_{free} includes only 5% of the data excluded from the refinement

Table 2:

```
HEADER     HORMONE/GROWTH FACTOR RECEPTOR
TITLE      STRUCTURE OF THE EXTRACELLULAR DOMAIN OF HUMAN EPIDERMAL
TITLE    2 GROWTH FACTOR (EGF) RECEPTOR IN AN COMPLEX WITH IMC-C225
TITLE    3 (CETUXIMBA/ERBITUX).
COMPND    MOL_ID: 1;
COMPND   2 MOLECULE: EPIDERMAL GROWTH FACTOR RECEPTOR;
COMPND   3 CHAIN: A;
COMPND   4 FRAGMENT: EXTRACELLULAR DOMAIN;
COMPND   5 ENGINEERED: YES;
COMPND   6 MOL_ID: 2;
COMPND   7 MOLECULE: FAB FRAGMENT FROM CETUXIMAB;
COMPND   8 CHAIN: C;
COMPND   9 CHAIN: D;
COMPND  10 SYNONYM: IMC-C225, ERBITUX;
COMPND  11 ENGINEERED: YES
SOURCE     MOL_ID: 1;
SOURCE   2 ORGANISM_SCIENTIFIC: HOMO SAPIENS;
SOURCE   3 ORGANISM_COMMON: HUMAN;
SOURCE   4 EXPRESSION_SYSTEM: SPODOPTERA FRUGIPERDA;
SOURCE   5 EXPRESSION_SYSTEM_COMMON: FALL ARMYWORM;
SOURCE   6 EXPRESSION_SYSTEM_STRAIN: VIRUS;
SOURCE   7 EXPRESSION_SYSTEM_VECTOR_TYPE: BACULOVIRUS;
SOURCE   8 MOL_ID: 2;
SOURCE     PROVIDED BY IMCLONE INC. AS FAB FRAGMENT
EXPDTA     X-RAY DIFFRACTION
REMARK   1
REMARK   2 RESOLUTION. 2.80 ANGSTROMS.
REMARK   3 REFINEMENT.
REMARK   3   PROGRAM     : REFMAC 5.1.24
REMARK   3   AUTHORS     : MURSHUDOV,VAGIN,DODSON
REMARK   3
REMARK   3    REFINEMENT TARGET : MAXIMUM LIKELIHOOD
REMARK   3
REMARK   3  DATA USED IN REFINEMENT.
REMARK   3   RESOLUTION RANGE HIGH (ANGSTROMS) :   2.81
REMARK   3   RESOLUTION RANGE LOW  (ANGSTROMS) :  50.00
REMARK   3   DATA CUTOFF                (SIGMA(F)) : NONE
REMARK   3   COMPLETENESS FOR RANGE        (%) :  99.44
REMARK   3   NUMBER OF REFLECTIONS             :   36547
REMARK   3
REMARK   3  FIT TO DATA USED IN REFINEMENT.
REMARK   3   CROSS-VALIDATION METHOD           : THROUGHOUT
REMARK   3   FREE R VALUE TEST SET SELECTION   : RANDOM
REMARK   3   R VALUE      (WORKING + TEST SET) : 0.22623
REMARK   3   R VALUE            (WORKING SET) :  0.22396
REMARK   3   FREE R VALUE                      :  0.26877
REMARK   3   FREE R VALUE TEST SET SIZE   (%) :  5.0
REMARK   3   FREE R VALUE TEST SET COUNT      :  1931
REMARK   3
REMARK   3  FIT IN THE HIGHEST RESOLUTION BIN.
REMARK   3   TOTAL NUMBER OF BINS USED           :      20
REMARK   3   BIN RESOLUTION RANGE HIGH           :   2.805
REMARK   3   BIN RESOLUTION RANGE LOW            :   2.878
REMARK   3   REFLECTION IN BIN      (WORKING SET) :    2605
REMARK   3   BIN R VALUE            (WORKING SET) :   0.335
REMARK   3   BIN FREE R VALUE SET COUNT           :     141
REMARK   3   BIN FREE R VALUE                     :   0.381
REMARK   3
REMARK   3  NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
REMARK   3   ALL ATOMS                :     8131
REMARK   3
REMARK   3  B VALUES.
REMARK   3   FROM WILSON PLOT           (A**2) : NULL
REMARK   3   MEAN B VALUE      (OVERALL, A**2) :   7.403
REMARK   3   OVERALL ANISOTROPIC B VALUE.
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REMARK   3    B11 (A**2) :     1.07
REMARK   3    B22 (A**2) :     0.32
REMARK   3    B33 (A**2) :    -1.83
REMARK   3    B12 (A**2) :     0.00
REMARK   3    B13 (A**2) :    -1.01
REMARK   3    B23 (A**2) :     0.00
REMARK   3
REMARK   3  ESTIMATED OVERALL COORDINATE ERROR.
REMARK   3   ESU BASED ON R VALUE                            (A):   0.910
REMARK   3   ESU BASED ON FREE R VALUE                       (A):   0.362
REMARK   3   ESU BASED ON MAXIMUM LIKELIHOOD                 (A):   0.295
REMARK   3   ESU FOR B VALUES BASED ON MAXIMUM LIKELIHOOD (A**2):  15.477
REMARK   3
REMARK   3 CORRELATION COEFFICIENTS.
REMARK   3   CORRELATION COEFFICIENT FO-FC      :   0.925
REMARK   3   CORRELATION COEFFICIENT FO-FC FREE :   0.888
REMARK   3
REMARK   3  RMS DEVIATIONS FROM IDEAL VALUES         COUNT    RMS    WEIGHT
REMARK   3   BOND LENGTHS REFINED ATOMS         (A):  8349 ; 0.028 ; 0.021
REMARK   3   BOND LENGTHS OTHERS                (A):  7109 ; 0.002 ; 0.020
REMARK   3   BOND ANGLES REFINED ATOMS   (DEGREES): 11411 ; 2.623 ; 1.993
REMARK   3   BOND ANGLES OTHERS          (DEGREES): 16529 ; 1.130 ; 3.000
REMARK   3   TORSION ANGLES, PERIOD 1    (DEGREES):  1042 ; 9.222 ; 5.000
REMARK   3   CHIRAL-CENTER RESTRAINTS       (A**3):  1349 ; 0.132 ; 0.200
REMARK   3   GENERAL PLANES REFINED ATOMS       (A):  9136 ; 0.009 ; 0.020
REMARK   3   GENERAL PLANES OTHERS              (A):  1532 ; 0.007 ; 0.020
REMARK   3   NON-BONDED CONTACTS REFINED ATOMS  (A):  1096 ; 0.255 ; 0.200
REMARK   3   NON-BONDED CONTACTS OTHERS         (A):  8610 ; 0.250 ; 0.200
REMARK   3   NON-BONDED TORSION OTHERS          (A):  5383 ; 0.106 ; 0.200
REMARK   3   H-BOND (X...Y) REFINED ATOMS       (A):   146 ; 0.207 ; 0.200
REMARK   3   SYMMETRY VDW REFINED ATOMS         (A):    11 ; 0.149 ; 0.200
REMARK   3   SYMMETRY VDW OTHERS                (A):    51 ; 0.288 ; 0.200
REMARK   3   SYMMETRY H-BOND REFINED ATOMS      (A):     3 ; 0.346 ; 0.200
REMARK   3
REMARK   3  ISOTROPIC THERMAL FACTOR RESTRAINTS.     COUNT   RMS    WEIGHT
REMARK   3   MAIN-CHAIN BOND REFINED ATOMS  (A**2):  5197 ; 0.717 ; 1.500
REMARK   3   MAIN-CHAIN ANGLE REFINED ATOMS (A**2):  8355 ; 1.289 ; 2.000
REMARK   3   SIDE-CHAIN BOND REFINED ATOMS  (A**2):  3152 ; 2.076 ; 3.000
REMARK   3   SIDE-CHAIN ANGLE REFINED ATOMS (A**2):  3056 ; 3.116 ; 4.500
REMARK   3
REMARK   3  NCS RESTRAINTS STATISTICS
REMARK   3   NUMBER OF NCS GROUPS : NULL
REMARK   3
REMARK   3  BULK SOLVENT MODELLING.
REMARK   3   METHOD USED : BABINET MODEL WITH MASK
REMARK   3   PARAMETERS FOR MASK CALCULATION
REMARK   3   VDW PROBE RADIUS   :  1.40
REMARK   3   ION PROBE RADIUS   :  0.80
REMARK   3   SHRINKAGE RADIUS   :  0.80
REMARK   3
REMARK   3  OTHER REFINEMENT REMARKS:
REMARK   3  HYDROGENS HAVE BEEN ADDED IN THE RIDING POSITIONS
REMARK   3
LINK         C1   NAG E3281        1.439   ND2  ASN A 328                 NAG-ASN
LINK         C1   NAG E3371        1.439   ND2  ASN A 337                 NAG-ASN
LINK         C1   NAG E3891        1.439   ND2  ASN A 389                 NAG-ASN
LINK         C1   NAG E5441        1.439   ND2  ASN A 544                 NAG-ASN
LINK         C1   NAG E5791        1.439   ND2  ASN A 579                 NAG-ASN
LINK         C1   NAG E 881        1.439   ND2  ASN D  88                 NAG-ASN
LINK         O3   NAG E 321                 N2   NAG E 322                 NAG-NAG
LINK         O3   NAG E 321                 C7   NAG E 322                 NAG-NAG1
LINK         O3   NAG E 321                 O7   NAG E 322                 NAG-NAG2
LINK         O2   MAN E 324        1.080   O2   MAN E 323                 MAN-MAN
CISPEP  1 SER C    7    PRO C    8                      0.00
CISPEP  2 TYR C  140    PRO C  141                      0.00
CISPEP  3 PHE D  152    PRO D  153                      0.00
CISPEP  4 GLU D  154    PRO D  155                      0.00
LINK             NAG E3281                 NAG E3282                 BETA1-4
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LINK              NAG E3282                    MAN E3283               BETA1-4
LINK              MAN E3283                    MAN E3284               BETA1-6
LINK              MAN E3284                    MAN E3287               ALPHA1-3
LINK              MAN E3287                    MAN E3288               BETA1-2
LINK              MAN E3283                    MAN E3285               ALPHA1-3
LINK              MAN E3285                    MAN E3286               BETA1-2
LINK              MAN E3284                    MAN E3289               ALPHA1-6
LINK              NAG E3371                    NAG E3372               ALPHA1-4
LINK              NAG E3372                    MAN E3373               ALPHA1-4
LINK              MAN E3373                    MAN E3374               BETA1-3
LINK              NAG E4201                    NAG E4202               ALPHA1-4
LINK              NAG E4202                    MAN E4203               ALPHA1-4
SSBOND   1 CYS A   34     CYS A    7
SSBOND   2 CYS A  163     CYS A  133
SSBOND   3 CYS A  175     CYS A  166
SSBOND   4 CYS A  183     CYS A  170
SSBOND   5 CYS A  207     CYS A  195
SSBOND   6 CYS A  216     CYS A  208
SSBOND   7 CYS A  224     CYS A  212
SSBOND   8 CYS A  236     CYS A  227
SSBOND   9 CYS A  283     CYS A  271
SSBOND  10 CYS A  302     CYS A  287
SSBOND  11 CYS A  309     CYS A  305
SSBOND  12 CYS A  338     CYS A  313
SSBOND  13 CYS A  499     CYS A  486
SSBOND  14 CYS A  511     CYS A  502
SSBOND  15 CYS A  531     CYS A  515
SSBOND  16 CYS A  547     CYS A  534
SSBOND  17 CYS A  555     CYS A  538
SSBOND  18 CYS A  567     CYS A  558
SSBOND  19 CYS A  593     CYS A  571
SSBOND  20 CYS A  604     CYS A  596
SSBOND  21 CYS A  612     CYS A  600
SSBOND  22 CYS A  446     CYS A  475
SSBOND  23 CYS A  482     CYS A  491
SSBOND  24 CYS A  199     CYS A  191
SSBOND  25 CYS C   88     CYS C   23
SSBOND  26 CYS C  194     CYS C  134
SSBOND  27 CYS D   95     CYS D   22
SSBOND  28 CYS D  202     CYS D  146
MODRES     NAG E  321  NAG-b-D                                    RENAME
MODRES     NAG E  322  NAG-b-D                                    RENAME
MODRES     MAN E  323  MAN-b-D                                    RENAME
MODRES     MAN E  324  MAN-b-D                                    RENAME
MODRES     NAG E 3281  NAG-b-D                                    RENAME
MODRES     NAG E 3282  NAG-b-D                                    RENAME
MODRES     MAN E 3283  MAN-b-D                                    RENAME
MODRES     MAN E 3284  MAN-b-D                                    RENAME
MODRES     MAN E 3287  MAN-a-D                                    RENAME
MODRES     MAN E 3288  MAN-b-D                                    RENAME
MODRES     MAN E 3285  MAN-a-D                                    RENAME
MODRES     MAN E 3286  MAN-b-D                                    RENAME
MODRES     MAN E 3289  MAN-a-D                                    RENAME
MODRES     NAG E 3371  NAG-b-D                                    RENAME
MODRES     NAG E 3372  NAG-a-D                                    RENAME
MODRES     MAN E 3373  MAN-a-D                                    RENAME
MODRES     MAN E 3374  MAN-b-D                                    RENAME
MODRES     NAG E 3891  NAG-b-D                                    RENAME
MODRES     NAG E 3892  NAG-b-D                                    RENAME
MODRES     NAG E 4201  NAG-b-D                                    RENAME
MODRES     NAG E 4202  NAG-a-D                                    RENAME
MODRES     MAN E 4203  MAN-a-D                                    RENAME
MODRES     NAG E 5041  NAG-b-D                                    RENAME
MODRES     NAG E 5441  NAG-b-D                                    RENAME
MODRES     NAG E 5791  NAG-b-D                                    RENAME
MODRES     NAG E  881  NAG-b-D                                    RENAME
CRYST1   77.823   70.861  147.122  90.00 102.48  90.00 P 1 21 1
SCALE1      0.012850  0.000000  0.002844        0.00000
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SCALE2       0.000000  0.014112  0.000000        0.00000
SCALE3       0.000000  0.000000  0.006962        0.00000
ATOM     1  N   LEU A   1      13.360   2.249  11.251  1.00100.92           N
ATOM     3  CA  LEU A   1      12.773   1.470  12.398  1.00105.53           C
ATOM     5  CB  LEU A   1      11.965   0.248  11.865  1.00108.08           C
ATOM     8  CG  LEU A   1      10.656  -0.207  12.561  1.00114.07           C
ATOM    10  CD1 LEU A   1       9.579   0.912  12.805  1.00118.27           C
ATOM    14  CD2 LEU A   1      10.023  -1.358  11.772  1.00115.39           C
ATOM    18  C   LEU A   1      13.923   1.032  13.354  1.00103.08           C
ATOM    19  O   LEU A   1      13.913   1.330  14.572  1.00105.39           O
ATOM    22  N   GLU A   2      14.904   0.333  12.772  1.00 98.75           N
ATOM    24  CA  GLU A   2      16.143  -0.038  13.449  1.00 95.06           C
ATOM    26  CB  GLU A   2      16.981  -0.917  12.518  1.00 90.85           C
ATOM    29  CG  GLU A   2      18.025  -1.714  13.253  1.00 89.57           C
ATOM    32  CD  GLU A   2      19.160  -2.205  12.358  1.00 88.28           C
ATOM    33  OE1 GLU A   2      19.720  -1.403  11.495  1.00 84.21           O
ATOM    34  OE2 GLU A   2      19.493  -3.427  12.562  1.00 89.66           O
ATOM    35  C   GLU A   2      16.965   1.207  13.819  1.00 92.58           C
ATOM    36  O   GLU A   2      17.201   2.090  12.955  1.00 90.00           O
ATOM    37  N   GLU A   3      17.396   1.261  15.096  1.00 93.29           N
ATOM    39  CA  GLU A   3      18.416   2.250  15.593  1.00 90.23           C
ATOM    41  CB  GLU A   3      18.082   2.630  17.081  1.00 94.21           C
ATOM    44  CG  GLU A   3      16.599   3.021  17.380  1.00100.00           C
ATOM    47  CD  GLU A   3      16.165   2.910  18.872  1.00105.60           C
ATOM    48  OE1 GLU A   3      16.983   2.478  19.722  1.00104.83           O
ATOM    49  OE2 GLU A   3      14.991   3.253  19.229  1.00109.98           O
ATOM    50  C   GLU A   3      19.925   1.714  15.412  1.00 84.70           C
ATOM    51  O   GLU A   3      20.405   0.936  16.274  1.00 85.80           O
ATOM    52  N   LYS A   4      20.618   2.086  14.305  1.00 79.39           N
ATOM    54  CA  LYS A   4      21.994   1.608  13.949  1.00 74.36           C
ATOM    56  CB  LYS A   4      22.472   2.211  12.626  1.00 70.99           C
ATOM    59  CG  LYS A   4      21.654   1.834  11.436  1.00 73.21           C
ATOM    62  CD  LYS A   4      22.526   1.263  10.289  1.00 71.25           C
ATOM    65  CE  LYS A   4      21.667   0.401   9.254  1.00 75.31           C
ATOM    68  NZ  LYS A   4      21.491   1.128   7.883  1.00 76.46           N
ATOM    72  C   LYS A   4      23.090   2.043  14.898  1.00 72.83           C
ATOM    73  O   LYS A   4      23.169   3.249  15.216  1.00 73.52           O
ATOM    74  N   LYS A   5      24.009   1.129  15.248  1.00 70.16           N
ATOM    76  CA  LYS A   5      24.974   1.410  16.328  1.00 68.70           C
ATOM    78  CB  LYS A   5      25.338   0.124  17.092  1.00 69.57           C
ATOM    81  CG  LYS A   5      24.052  -0.768  17.413  1.00 75.20           C
ATOM    84  CD  LYS A   5      23.641  -0.893  18.917  1.00 79.29           C
ATOM    87  CE  LYS A   5      22.196  -0.390  19.171  1.00 83.67           C
ATOM    90  NZ  LYS A   5      21.488  -1.198  20.194  1.00 91.94           N
ATOM    94  C   LYS A   5      26.206   2.153  15.828  1.00 64.30           C
ATOM    95  O   LYS A   5      26.682   1.926  14.749  1.00 61.85           O
ATOM    96  N   VAL A   6      26.724   3.047  16.647  1.00 64.34           N
ATOM    98  CA  VAL A   6      27.596   4.114  16.203  1.00 61.78           C
ATOM   100  CB  VAL A   6      26.890   5.440  16.468  1.00 63.52           C
ATOM   102  CG1 VAL A   6      27.642   6.564  15.784  1.00 61.56           C
ATOM   106  CG2 VAL A   6      25.473   5.382  15.997  1.00 66.36           C
ATOM   110  C   VAL A   6      28.801   4.255  17.058  1.00 61.00           C
ATOM   111  O   VAL A   6      28.640   4.254  18.203  1.00 63.87           O
ATOM   112  N   CYS A   7      29.982   4.525  16.546  1.00 58.45           N
ATOM   114  CA  CYS A   7      31.094   4.807  17.432  1.00 59.36           C
ATOM   116  CB  CYS A   7      31.943   3.561  17.567  1.00 57.65           C
ATOM   119  SG  CYS A   7      32.512   2.903  16.006  1.00 58.73           S
ATOM   120  C   CYS A   7      31.926   5.983  16.972  1.00 58.39           C
ATOM   121  O   CYS A   7      31.955   6.264  15.829  1.00 57.51           O
ATOM   122  N   GLN A   8      32.585   6.702  17.874  1.00 61.38           N
ATOM   124  CA  GLN A   8      33.635   7.683  17.502  1.00 61.54           C
ATOM   126  CB  GLN A   8      34.054   8.482  18.741  1.00 63.20           C
ATOM   129  CG  GLN A   8      32.927   9.373  19.254  1.00 67.39           C
ATOM   132  CD  GLN A   8      32.574  10.563  18.334  1.00 70.24           C
ATOM   133  OE1 GLN A   8      33.273  10.818  17.335  1.00 70.24           O
ATOM   134  NE2 GLN A   8      31.479  11.300  18.673  1.00 75.33           N
ATOM   137  C   GLN A   8      34.857   6.935  16.978  1.00 60.56           C
ATOM   138  O   GLN A   8      35.205   5.857  17.449  1.00 63.77           O
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ATOM  139  N   GLY A   9      35.579   7.394  16.026  1.00 58.91           N
ATOM  141  CA  GLY A   9      36.720   6.527  15.726  1.00 57.92           C
ATOM  144  C   GLY A   9      38.036   7.249  15.990  1.00 60.20           C
ATOM  145  O   GLY A   9      38.259   8.517  15.590  1.00 64.00           O
ATOM  146  N   THR A  10      38.926   6.543  16.652  1.00 59.60           N
ATOM  148  CA  THR A  10      40.369   6.891  16.558  1.00 60.20           C
ATOM  150  CB  THR A  10      41.078   5.669  16.340  1.00 59.09           C
ATOM  152  OG1 THR A  10      40.256   4.658  16.885  1.00 66.90           O
ATOM  154  CG2 THR A  10      42.281   5.634  17.296  1.00 61.60           C
ATOM  158  C   THR A  10      40.998   7.884  15.538  1.00 57.46           C
ATOM  159  O   THR A  10      40.657   7.865  14.372  1.00 55.26           O
ATOM  160  N   SER A  11      41.945   8.692  16.037  1.00 57.21           N
ATOM  162  CA  SER A  11      42.838   9.479  15.220  1.00 56.01           C
ATOM  164  CB  SER A  11      42.438  10.930  15.303  1.00 58.10           C
ATOM  167  OG  SER A  11      41.073  11.006  15.003  1.00 58.88           O
ATOM  169  C   SER A  11      44.237   9.330  15.720  1.00 56.12           C
ATOM  170  O   SER A  11      44.916  10.266  16.008  1.00 56.39           O
ATOM  171  N   ASN A  12      44.687   8.118  15.834  1.00 55.44           N
ATOM  173  CA  ASN A  12      46.051   7.926  16.295  1.00 58.03           C
ATOM  175  CB  ASN A  12      46.089   6.865  17.413  1.00 58.48           C
ATOM  178  CG  ASN A  12      44.886   6.955  18.346  1.00 59.19           C
ATOM  179  OD1 ASN A  12      44.347   8.062  18.563  1.00 59.90           O
ATOM  180  ND2 ASN A  12      44.426   5.784  18.880  1.00 56.12           N
ATOM  183  C   ASN A  12      47.084   7.624  15.172  1.00 57.48           C
ATOM  184  O   ASN A  12      48.285   7.497  15.459  1.00 60.22           O
ATOM  185  N   LYS A  13      46.655   7.497  13.923  1.00 54.67           N
ATOM  187  CA  LYS A  13      47.614   7.192  12.876  1.00 55.14           C
ATOM  189  CB  LYS A  13      48.381   8.476  12.501  1.00 57.96           C
ATOM  192  CG  LYS A  13      47.420   9.634  12.179  1.00 57.91           C
ATOM  195  CD  LYS A  13      48.048  10.642  11.298  1.00 60.41           C
ATOM  198  CE  LYS A  13      47.075  11.808  10.983  1.00 63.26           C
ATOM  201  NZ  LYS A  13      47.797  13.059  10.472  1.00 67.44           N
ATOM  205  C   LYS A  13      48.582   6.093  13.297  1.00 56.16           C
ATOM  206  O   LYS A  13      48.171   4.995  13.766  1.00 56.29           O
ATOM  207  N   LEU A  14      49.880   6.360  13.196  1.00 57.76           N
ATOM  209  CA  LEU A  14      50.813   5.266  13.406  1.00 57.81           C
ATOM  211  CB  LEU A  14      51.985   5.375  12.424  1.00 58.72           C
ATOM  214  CG  LEU A  14      51.524   5.396  10.955  1.00 56.05           C
ATOM  216  CD1 LEU A  14      52.683   5.353   9.975  1.00 57.66           C
ATOM  220  CD2 LEU A  14      50.536   4.287  10.645  1.00 53.10           C
ATOM  224  C   LEU A  14      51.243   5.154  14.855  1.00 60.01           C
ATOM  225  O   LEU A  14      52.038   4.261  15.187  1.00 61.31           O
ATOM  226  N   THR A  15      50.731   6.037  15.716  1.00 60.49           N
ATOM  228  CA  THR A  15      50.925   5.854  17.142  1.00 63.51           C
ATOM  230  CB  THR A  15      50.300   6.950  17.944  1.00 64.28           C
ATOM  232  OG1 THR A  15      50.825   8.199  17.543  1.00 65.35           O
ATOM  234  CG2 THR A  15      50.791   6.867  19.429  1.00 69.05           C
ATOM  238  C   THR A  15      50.397   4.495  17.648  1.00 63.38           C
ATOM  239  O   THR A  15      49.322   4.011  17.232  1.00 61.95           O
ATOM  240  N   GLN A  16      51.190   3.874  18.517  1.00 66.09           N
ATOM  242  CA  GLN A  16      50.868   2.561  19.107  1.00 66.17           C
ATOM  244  CB  GLN A  16      52.007   1.560  18.862  1.00 67.19           C
ATOM  247  CG  GLN A  16      51.728   0.217  19.455  1.00 66.47           C
ATOM  250  CD  GLN A  16      52.838  -0.766  19.295  1.00 66.59           C
ATOM  251  OE1 GLN A  16      53.535  -0.791  18.274  1.00 64.81           O
ATOM  252  NE2 GLN A  16      52.984  -1.624  20.293  1.00 68.23           N
ATOM  255  C   GLN A  16      50.617   2.737  20.632  1.00 69.21           C
ATOM  256  O   GLN A  16      51.390   3.422  21.325  1.00 73.28           O
ATOM  257  N   LEU A  17      49.533   2.144  21.148  1.00 67.72           N
ATOM  259  CA  LEU A  17      49.033   2.455  22.486  1.00 69.49           C
ATOM  261  CB  LEU A  17      47.504   2.620  22.478  1.00 67.31           C
ATOM  264  CG  LEU A  17      46.923   3.591  21.437  1.00 64.82           C
ATOM  266  CD1 LEU A  17      45.375   3.565  21.397  1.00 62.29           C
ATOM  270  CD2 LEU A  17      47.487   5.032  21.639  1.00 66.62           C
ATOM  274  C   LEU A  17      49.450   1.295  23.363  1.00 71.74           C
ATOM  275  O   LEU A  17      48.609   0.497  23.794  1.00 71.04           O
ATOM  276  N   GLY A  18      50.764   1.193  23.572  1.00 73.66           N
ATOM  278  CA  GLY A  18      51.329   0.265  24.520  1.00 76.87           C
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ATOM	281	C	GLY	A	18	51.609	-1.038	23.830	1.00	75.65	C
ATOM	282	O	GLY	A	18	51.968	-1.022	22.636	1.00	72.82	O
ATOM	283	N	THR	A	19	51.451	-2.140	24.593	1.00	77.55	N
ATOM	285	CA	THR	A	19	51.581	-3.516	24.099	1.00	76.35	C
ATOM	287	CB	THR	A	19	51.171	-4.562	25.154	1.00	79.33	C
ATOM	289	OG1	THR	A	19	51.943	-4.422	26.343	1.00	83.29	O
ATOM	291	CG2	THR	A	19	51.574	-5.993	24.734	1.00	82.13	C
ATOM	295	C	THR	A	19	50.703	-3.715	22.916	1.00	71.66	C
ATOM	296	O	THR	A	19	49.617	-3.221	22.854	1.00	69.09	O
ATOM	297	N	PHE	A	20	51.211	-4.445	21.952	1.00	71.13	N
ATOM	299	CA	PHE	A	20	50.404	-4.916	20.873	1.00	68.02	C
ATOM	301	CB	PHE	A	20	51.089	-6.099	20.219	1.00	69.47	C
ATOM	304	CG	PHE	A	20	52.300	-5.752	19.353	1.00	70.89	C
ATOM	305	CD1	PHE	A	20	53.413	-6.599	19.350	1.00	74.82	C
ATOM	307	CE1	PHE	A	20	54.500	-6.334	18.562	1.00	76.46	C
ATOM	309	CZ	PHE	A	20	54.491	-5.207	17.726	1.00	74.93	C
ATOM	311	CE2	PHE	A	20	53.391	-4.360	17.707	1.00	69.96	C
ATOM	313	CD2	PHE	A	20	52.303	-4.641	18.517	1.00	69.30	C
ATOM	315	C	PHE	A	20	49.083	-5.409	21.417	1.00	67.44	C
ATOM	316	O	PHE	A	20	48.034	-5.063	20.903	1.00	63.96	O
ATOM	317	N	GLU	A	21	49.124	-6.245	22.449	1.00	71.20	N
ATOM	319	CA	GLU	A	21	47.872	-6.628	23.125	1.00	71.94	C
ATOM	321	CB	GLU	A	21	48.020	-7.643	24.239	1.00	75.53	C
ATOM	324	CG	GLU	A	21	46.614	-8.017	24.681	1.00	77.19	C
ATOM	327	CD	GLU	A	21	46.443	-9.456	25.095	1.00	84.24	C
ATOM	328	OE1	GLU	A	21	46.760	-9.761	26.300	1.00	86.94	O
ATOM	329	OE2	GLU	A	21	45.962	-10.251	24.217	1.00	85.07	O
ATOM	330	C	GLU	A	21	47.004	-5.473	23.632	1.00	71.25	C
ATOM	331	O	GLU	A	21	45.855	-5.383	23.189	1.00	69.23	O
ATOM	332	N	ASP	A	22	47.496	-4.605	24.525	1.00	73.11	N
ATOM	334	CA	ASP	A	22	46.671	-3.422	24.914	1.00	72.68	C
ATOM	336	CB	ASP	A	22	47.456	-2.386	25.699	1.00	75.14	C
ATOM	339	CG	ASP	A	22	48.062	-2.919	26.931	1.00	79.93	C
ATOM	340	OD1	ASP	A	22	47.490	-3.833	27.552	1.00	82.29	O
ATOM	341	OD2	ASP	A	22	49.142	-2.460	27.345	1.00	83.24	O
ATOM	342	C	ASP	A	22	46.054	-2.652	23.717	1.00	68.07	C
ATOM	343	O	ASP	A	22	44.945	-2.133	23.790	1.00	67.64	O
ATOM	344	N	HIS	A	23	46.807	-2.553	22.638	1.00	65.04	N
ATOM	346	CA	HIS	A	23	46.409	-1.772	21.532	1.00	61.33	C
ATOM	348	CB	HIS	A	23	47.588	-1.723	20.576	1.00	60.16	C
ATOM	351	CG	HIS	A	23	47.430	-0.802	19.398	1.00	57.41	C
ATOM	352	ND1	HIS	A	23	47.673	0.552	19.463	1.00	58.45	N
ATOM	354	CE1	HIS	A	23	47.519	1.098	18.275	1.00	53.82	C
ATOM	356	NE2	HIS	A	23	47.197	0.141	17.433	1.00	55.61	N
ATOM	358	CD2	HIS	A	23	47.171	-1.062	18.100	1.00	54.92	C
ATOM	360	C	HIS	A	23	45.178	-2.497	21.012	1.00	59.61	C
ATOM	361	O	HIS	A	23	44.118	-1.917	20.865	1.00	59.40	O
ATOM	362	N	PHE	A	24	45.286	-3.789	20.800	1.00	59.94	N
ATOM	364	CA	PHE	A	24	44.165	-4.543	20.272	1.00	58.09	C
ATOM	366	CB	PHE	A	24	44.597	-5.974	19.965	1.00	58.40	C
ATOM	369	CG	PHE	A	24	43.471	-6.884	19.627	1.00	56.74	C
ATOM	370	CD1	PHE	A	24	43.023	-6.988	18.340	1.00	54.72	C
ATOM	372	CE1	PHE	A	24	41.961	-7.863	18.065	1.00	55.93	C
ATOM	374	CZ	PHE	A	24	41.358	-8.614	19.113	1.00	55.91	C
ATOM	376	CE2	PHE	A	24	41.803	-8.486	20.339	1.00	56.90	C
ATOM	378	CD2	PHE	A	24	42.844	-7.634	20.609	1.00	56.82	C
ATOM	380	C	PHE	A	24	42.939	-4.503	21.203	1.00	59.52	C
ATOM	381	O	PHE	A	24	41.843	-4.307	20.754	1.00	58.02	O
ATOM	382	N	LEU	A	25	43.108	-4.645	22.501	1.00	63.07	N
ATOM	384	CA	LEU	A	25	41.933	-4.666	23.391	1.00	65.30	C
ATOM	386	CB	LEU	A	25	42.314	-4.821	24.840	1.00	68.45	C
ATOM	389	CG	LEU	A	25	43.082	-6.114	25.072	1.00	72.33	C
ATOM	391	CD1	LEU	A	25	43.607	-6.190	26.513	1.00	78.48	C
ATOM	395	CD2	LEU	A	25	42.279	-7.433	24.705	1.00	72.81	C
ATOM	399	C	LEU	A	25	41.117	-3.401	23.190	1.00	64.01	C
ATOM	400	O	LEU	A	25	39.876	-3.424	23.279	1.00	63.70	O
ATOM	401	N	SER	A	26	41.826	-2.309	22.885	1.00	63.31	N
ATOM	403	CA	SER	A	26	41.237	-0.975	22.871	1.00	63.14	C

ATOM	405	CB	SER	A	26	42.233	0.064	23.416	1.00	64.86	C
ATOM	408	OG	SER	A	26	42.684	0.916	22.406	1.00	65.68	O
ATOM	410	C	SER	A	26	40.693	-0.634	21.502	1.00	59.23	C
ATOM	411	O	SER	A	26	39.666	0.067	21.392	1.00	58.89	O
ATOM	412	N	LEU	A	27	41.375	-1.155	20.478	1.00	56.73	N
ATOM	414	CA	LEU	A	27	40.789	-1.286	19.177	1.00	53.81	C
ATOM	416	CB	LEU	A	27	41.575	-2.211	18.289	1.00	52.35	C
ATOM	419	CG	LEU	A	27	41.132	-2.136	16.819	1.00	49.44	C
ATOM	421	CD1	LEU	A	27	41.376	-0.797	16.298	1.00	46.75	C
ATOM	425	CD2	LEU	A	27	41.881	-3.150	15.889	1.00	49.11	C
ATOM	429	C	LEU	A	27	39.461	-1.911	19.358	1.00	54.56	C
ATOM	430	O	LEU	A	27	38.466	-1.407	18.837	1.00	55.41	O
ATOM	431	N	GLN	A	28	39.456	-3.009	20.096	1.00	55.62	N
ATOM	433	CA	GLN	A	28	38.281	-3.800	20.297	1.00	56.39	C
ATOM	435	CB	GLN	A	28	38.618	-5.091	21.063	1.00	59.09	C
ATOM	438	CG	GLN	A	28	37.773	-6.291	20.641	1.00	60.00	C
ATOM	441	CD	GLN	A	28	38.007	-7.567	21.488	1.00	64.33	C
ATOM	442	OE1	GLN	A	28	38.723	-7.563	22.480	1.00	64.48	O
ATOM	443	NE2	GLN	A	28	37.405	-8.649	21.059	1.00	65.54	N
ATOM	446	C	GLN	A	28	37.210	-3.034	21.026	1.00	57.59	C
ATOM	447	O	GLN	A	28	36.029	-3.157	20.656	1.00	57.19	O
ATOM	448	N	ARG	A	29	37.594	-2.271	22.063	1.00	59.69	N
ATOM	450	CA	ARG	A	29	36.584	-1.653	22.971	1.00	62.22	C
ATOM	452	CB	ARG	A	29	37.133	-1.079	24.311	1.00	64.71	C
ATOM	461	C	ARG	A	29	35.845	-0.627	22.145	1.00	60.09	C
ATOM	462	O	ARG	A	29	34.649	-0.509	22.287	1.00	61.92	O
ATOM	463	N	MET	A	30	36.547	0.031	21.226	1.00	57.09	N
ATOM	465	CA	MET	A	30	35.975	1.057	20.390	1.00	55.26	C
ATOM	467	CB	MET	A	30	37.106	1.794	19.716	1.00	53.16	C
ATOM	470	CG	MET	A	30	36.722	2.870	18.699	1.00	51.84	C
ATOM	473	SD	MET	A	30	35.550	4.071	19.326	1.00	54.54	S
ATOM	474	CE	MET	A	30	36.573	5.055	20.420	1.00	55.60	C
ATOM	478	C	MET	A	30	35.059	0.480	19.332	1.00	53.92	C
ATOM	479	O	MET	A	30	33.907	0.863	19.200	1.00	55.74	O
ATOM	480	N	PHE	A	31	35.550	-0.468	18.559	1.00	52.04	N
ATOM	482	CA	PHE	A	31	34.781	-0.943	17.430	1.00	49.68	C
ATOM	484	CB	PHE	A	31	35.756	-1.193	16.273	1.00	47.66	C
ATOM	487	CG	PHE	A	31	36.433	0.085	15.783	1.00	46.71	C
ATOM	488	CD1	PHE	A	31	37.781	0.305	15.979	1.00	46.45	C
ATOM	490	CE1	PHE	A	31	38.321	1.541	15.566	1.00	47.62	C
ATOM	492	CZ	PHE	A	31	37.509	2.502	14.959	1.00	44.30	C
ATOM	494	CE2	PHE	A	31	36.194	2.278	14.788	1.00	42.28	C
ATOM	496	CD2	PHE	A	31	35.663	1.104	15.190	1.00	44.72	C
ATOM	498	C	PHE	A	31	33.789	-2.089	17.673	1.00	50.47	C
ATOM	499	O	PHE	A	31	33.081	-2.417	16.777	1.00	48.38	O
ATOM	500	N	ASN	A	32	33.613	-2.585	18.890	1.00	53.44	N
ATOM	502	CA	ASN	A	32	32.885	-3.794	19.024	1.00	56.24	C
ATOM	504	CB	ASN	A	32	32.747	-4.260	20.430	1.00	59.73	C
ATOM	507	CG	ASN	A	32	32.163	-5.711	20.520	1.00	62.37	C
ATOM	508	OD1	ASN	A	32	32.440	-6.605	19.743	1.00	58.57	O
ATOM	509	ND2	ASN	A	32	31.353	-5.911	21.504	1.00	72.53	N
ATOM	512	C	ASN	A	32	31.558	-3.958	18.295	1.00	58.05	C
ATOM	513	O	ASN	A	32	31.416	-4.866	17.436	1.00	59.26	O
ATOM	514	N	ASN	A	33	30.525	-3.217	18.586	1.00	60.46	N
ATOM	516	CA	ASN	A	33	29.286	-3.562	17.838	1.00	61.41	C
ATOM	518	CB	ASN	A	33	28.089	-3.573	18.789	1.00	65.21	C
ATOM	521	CG	ASN	A	33	28.127	-4.776	19.664	1.00	67.90	C
ATOM	522	OD1	ASN	A	33	28.491	-5.890	19.232	1.00	63.09	O
ATOM	523	ND2	ASN	A	33	27.793	-4.578	20.898	1.00	73.36	N
ATOM	526	C	ASN	A	33	29.053	-2.692	16.659	1.00	59.01	C
ATOM	527	O	ASN	A	33	27.930	-2.561	16.195	1.00	60.95	O
ATOM	528	N	CYS	A	34	30.114	-2.094	16.167	1.00	55.98	N
ATOM	530	CA	CYS	A	34	29.963	-0.850	15.449	1.00	55.77	C
ATOM	532	CB	CYS	A	34	31.281	-0.106	15.502	1.00	54.43	C
ATOM	535	SG	CYS	A	34	31.232	1.564	14.851	1.00	57.88	S
ATOM	536	C	CYS	A	34	29.476	-0.995	13.995	1.00	54.12	C
ATOM	537	O	CYS	A	34	30.046	-1.728	13.154	1.00	52.55	O
ATOM	538	N	GLU	A	35	28.408	-0.279	13.701	1.00	54.92	N

ATOM	540	CA	GLU	A	35	27.854	-0.268	12.353	1.00	54.01	C
ATOM	542	CB	GLU	A	35	26.296	-0.439	12.423	1.00	57.63	C
ATOM	545	CG	GLU	A	35	25.807	-1.904	12.595	1.00	60.04	C
ATOM	548	CD	GLU	A	35	24.265	-2.089	12.755	1.00	66.48	C
ATOM	549	OE1	GLU	A	35	23.430	-1.283	12.291	1.00	69.81	O
ATOM	550	OE2	GLU	A	35	23.846	-3.086	13.360	1.00	69.46	O
ATOM	551	C	GLU	A	35	28.366	0.985	11.531	1.00	50.84	C
ATOM	552	O	GLU	A	35	28.835	0.861	10.394	1.00	47.39	O
ATOM	553	N	VAL	A	36	28.298	2.154	12.164	1.00	51.35	N
ATOM	555	CA	VAL	A	36	28.759	3.440	11.634	1.00	49.75	C
ATOM	557	CB	VAL	A	36	27.613	4.468	11.651	1.00	52.18	C
ATOM	559	CG1	VAL	A	36	28.075	5.785	11.084	1.00	50.62	C
ATOM	563	CG2	VAL	A	36	26.441	3.964	10.857	1.00	53.96	C
ATOM	567	C	VAL	A	36	29.898	4.062	12.454	1.00	48.86	C
ATOM	568	O	VAL	A	36	29.810	4.215	13.664	1.00	50.58	O
ATOM	569	N	VAL	A	37	30.955	4.440	11.786	1.00	46.36	N
ATOM	571	CA	VAL	A	37	32.030	5.169	12.417	1.00	46.84	C
ATOM	573	CB	VAL	A	37	33.361	4.637	11.878	1.00	44.64	C
ATOM	575	CG1	VAL	A	37	34.537	5.214	12.638	1.00	45.69	C
ATOM	579	CG2	VAL	A	37	33.372	3.171	11.950	1.00	43.09	C
ATOM	583	C	VAL	A	37	31.876	6.682	12.091	1.00	47.84	C
ATOM	584	O	VAL	A	37	32.128	7.150	10.959	1.00	47.48	O
ATOM	585	N	LEU	A	38	31.406	7.446	13.057	1.00	49.78	N
ATOM	587	CA	LEU	A	38	31.412	8.917	12.977	1.00	50.77	C
ATOM	589	CB	LEU	A	38	31.068	9.494	14.341	1.00	53.03	C
ATOM	592	CG	LEU	A	38	29.739	9.093	14.919	1.00	54.79	C
ATOM	594	CD1	LEU	A	38	29.401	10.042	16.017	1.00	57.99	C
ATOM	598	CD2	LEU	A	38	28.708	9.110	13.851	1.00	54.29	C
ATOM	602	C	LEU	A	38	32.752	9.540	12.550	1.00	45.42	C
ATOM	603	O	LEU	A	38	32.748	10.523	11.843	1.00	50.78	O
ATOM	604	N	GLY	A	39	33.862	8.991	13.049	1.00	48.45	N
ATOM	606	CA	GLY	A	39	35.219	9.454	12.840	1.00	47.35	C
ATOM	609	C	GLY	A	39	35.961	8.563	11.878	1.00	45.06	C
ATOM	610	O	GLY	A	39	35.409	8.141	10.867	1.00	45.58	O
ATOM	611	N	ASN	A	40	37.225	8.286	12.136	1.00	44.47	N
ATOM	613	CA	ASN	A	40	37.921	7.385	11.256	1.00	42.80	C
ATOM	615	CB	ASN	A	40	39.282	7.891	10.781	1.00	43.45	C
ATOM	618	CG	ASN	A	40	39.429	9.389	10.797	1.00	44.32	C
ATOM	619	OD1	ASN	A	40	38.929	10.062	9.935	1.00	45.99	O
ATOM	620	ND2	ASN	A	40	40.205	9.897	11.734	1.00	44.54	N
ATOM	623	C	ASN	A	40	38.159	6.049	11.918	1.00	42.57	C
ATOM	624	O	ASN	A	40	38.211	5.931	13.148	1.00	44.09	O
ATOM	625	N	LEU	A	41	38.390	5.082	11.046	1.00	40.76	N
ATOM	627	CA	LEU	A	41	38.610	3.727	11.369	1.00	40.75	C
ATOM	629	CB	LEU	A	41	37.822	2.850	10.400	1.00	39.36	C
ATOM	632	CG	LEU	A	41	38.090	1.346	10.561	1.00	40.49	C
ATOM	634	CD1	LEU	A	41	37.763	0.779	11.990	1.00	44.00	C
ATOM	638	CD2	LEU	A	41	37.247	0.567	9.646	1.00	41.86	C
ATOM	642	C	LEU	A	41	40.058	3.488	11.150	1.00	40.97	C
ATOM	643	O	LEU	A	41	40.525	3.672	10.045	1.00	41.21	O
ATOM	644	N	GLU	A	42	40.785	3.046	12.166	1.00	42.33	N
ATOM	646	CA	GLU	A	42	42.201	2.775	12.003	1.00	42.70	C
ATOM	648	CB	GLU	A	42	43.020	3.721	12.808	1.00	44.36	C
ATOM	651	CG	GLU	A	42	42.695	5.159	12.455	1.00	47.91	C
ATOM	654	CD	GLU	A	42	43.418	6.201	13.308	1.00	51.77	C
ATOM	655	OE1	GLU	A	42	43.332	6.066	14.581	1.00	51.29	O
ATOM	656	OE2	GLU	A	42	44.027	7.154	12.688	1.00	51.12	O
ATOM	657	C	GLU	A	42	42.486	1.426	12.488	1.00	43.28	C
ATOM	658	O	GLU	A	42	42.282	1.164	13.667	1.00	45.62	O
ATOM	659	N	ILE	A	43	42.979	0.557	11.605	1.00	42.12	N
ATOM	661	CA	ILE	A	43	43.421	-0.746	12.046	1.00	42.21	C
ATOM	663	CB	ILE	A	43	42.633	-1.771	11.341	1.00	40.74	C
ATOM	665	CG1	ILE	A	43	41.166	-1.548	11.668	1.00	39.80	C
ATOM	668	CD1	ILE	A	43	40.301	-1.940	10.641	1.00	39.39	C
ATOM	672	CG2	ILE	A	43	43.052	-3.107	11.840	1.00	43.58	C
ATOM	676	C	ILE	A	43	44.919	-0.912	11.876	1.00	42.70	C
ATOM	677	O	ILE	A	43	45.477	-0.694	10.858	1.00	42.81	O
ATOM	678	N	THR	A	44	45.555	-1.355	12.916	1.00	44.98	N

ATOM	680	CA	THR	A	44	46.888	-0.922	13.235	1.00	46.86	C
ATOM	682	CB	THR	A	44	46.703	0.473	13.748	1.00	47.31	C
ATOM	684	OG1	THR	A	44	46.847	1.369	12.637	1.00	48.62	O
ATOM	686	CG2	THR	A	44	47.744	0.877	14.643	1.00	49.36	C
ATOM	690	C	THR	A	44	47.609	-1.798	14.277	1.00	49.13	C
ATOM	691	O	THR	A	44	47.102	-2.055	15.380	1.00	49.25	O
ATOM	692	N	TYR	A	45	48.794	-2.258	13.899	1.00	50.28	N
ATOM	694	CA	TYR	A	45	49.613	-3.069	14.773	1.00	52.93	C
ATOM	696	CB	TYR	A	45	50.095	-2.247	15.992	1.00	55.11	C
ATOM	699	CG	TYR	A	45	50.992	-1.106	15.593	1.00	55.23	C
ATOM	700	CD1	TYR	A	45	50.530	0.165	15.617	1.00	54.89	C
ATOM	702	CE1	TYR	A	45	51.299	1.209	15.259	1.00	54.93	C
ATOM	704	CZ	TYR	A	45	52.553	0.999	14.808	1.00	56.32	C
ATOM	705	OH	TYR	A	45	53.273	2.109	14.459	1.00	62.09	O
ATOM	707	CE2	TYR	A	45	53.066	-0.250	14.754	1.00	56.10	C
ATOM	709	CD2	TYR	A	45	52.279	-1.306	15.143	1.00	56.61	C
ATOM	711	C	TYR	A	45	48.946	-4.393	15.189	1.00	53.13	C
ATOM	712	O	TYR	A	45	49.477	-5.102	16.030	1.00	56.05	O
ATOM	713	N	VAL	A	46	47.843	-4.775	14.559	1.00	50.80	N
ATOM	715	CA	VAL	A	46	47.215	-6.039	14.908	1.00	51.76	C
ATOM	717	CB	VAL	A	46	45.861	-6.206	14.238	1.00	49.39	C
ATOM	719	CG1	VAL	A	46	45.204	-7.480	14.608	1.00	50.02	C
ATOM	723	CG2	VAL	A	46	44.963	-5.087	14.699	1.00	51.23	C
ATOM	727	C	VAL	A	46	48.118	-7.153	14.509	1.00	53.22	C
ATOM	728	O	VAL	A	46	48.496	-7.203	13.361	1.00	53.23	O
ATOM	729	N	GLN	A	47	48.430	-8.050	15.436	1.00	56.14	N
ATOM	731	CA	GLN	A	47	49.344	-9.151	15.162	1.00	59.49	C
ATOM	733	CB	GLN	A	47	50.283	-9.340	16.373	1.00	63.39	C
ATOM	736	CG	GLN	A	47	51.227	-8.130	16.701	1.00	64.49	C
ATOM	739	CD	GLN	A	47	52.252	-7.834	15.592	1.00	64.62	C
ATOM	740	OE1	GLN	A	47	52.947	-8.741	15.096	1.00	64.30	O
ATOM	741	NE2	GLN	A	47	52.335	-6.564	15.191	1.00	65.38	N
ATOM	744	C	GLN	A	47	48.684	-10.517	14.730	1.00	60.25	C
ATOM	745	O	GLN	A	47	47.461	-10.670	14.710	1.00	59.39	O
ATOM	746	N	ARG	A	48	49.500	-11.502	14.381	1.00	62.64	N
ATOM	748	CA	ARG	A	48	48.950	-12.787	13.940	1.00	64.49	C
ATOM	750	CB	ARG	A	48	50.048	-13.799	13.534	1.00	67.77	C
ATOM	753	CG	ARG	A	48	50.278	-13.822	12.038	1.00	68.04	C
ATOM	756	CD	ARG	A	48	51.258	-14.816	11.673	1.00	74.89	C
ATOM	759	NE	ARG	A	48	50.712	-15.969	10.921	1.00	78.86	N
ATOM	761	CZ	ARG	A	48	50.734	-17.271	11.322	1.00	76.74	C
ATOM	762	NH1	ARG	A	48	51.286	-17.691	12.474	1.00	78.50	N
ATOM	765	NH2	ARG	A	48	50.196	-18.159	10.526	1.00	78.65	N
ATOM	768	C	ARG	A	48	48.077	-13.463	14.977	1.00	65.82	C
ATOM	769	O	ARG	A	48	48.387	-13.433	16.148	1.00	69.06	O
ATOM	770	N	ASN	A	49	47.020	-14.120	14.508	1.00	64.58	N
ATOM	772	CA	ASN	A	49	46.070	-14.867	15.340	1.00	65.41	C
ATOM	774	CB	ASN	A	49	46.724	-16.066	16.015	1.00	69.43	C
ATOM	777	CG	ASN	A	49	47.310	-16.988	15.043	1.00	70.04	C
ATOM	778	OD1	ASN	A	49	46.635	-17.426	14.102	1.00	68.58	O
ATOM	779	ND2	ASN	A	49	48.587	-17.271	15.207	1.00	73.31	N
ATOM	782	C	ASN	A	49	45.334	-14.079	16.368	1.00	64.69	C
ATOM	783	O	ASN	A	49	44.878	-14.646	17.355	1.00	66.94	O
ATOM	784	N	TYR	A	50	45.214	-12.785	16.166	1.00	61.48	N
ATOM	786	CA	TYR	A	50	44.278	-12.059	16.973	1.00	62.03	C
ATOM	788	CB	TYR	A	50	44.795	-10.662	17.261	1.00	61.43	C
ATOM	791	CG	TYR	A	50	45.768	-10.556	18.432	1.00	64.24	C
ATOM	792	CD1	TYR	A	50	47.030	-11.118	18.363	1.00	65.32	C
ATOM	794	CE1	TYR	A	50	47.922	-10.989	19.436	1.00	69.50	C
ATOM	796	CZ	TYR	A	50	47.553	-10.279	20.561	1.00	70.19	C
ATOM	797	OH	TYR	A	50	48.425	-10.156	21.594	1.00	74.47	O
ATOM	799	CE2	TYR	A	50	46.328	-9.705	20.642	1.00	67.54	C
ATOM	801	CD2	TYR	A	50	45.446	-9.818	19.573	1.00	64.01	C
ATOM	803	C	TYR	A	50	42.992	-11.996	16.156	1.00	59.86	C
ATOM	804	O	TYR	A	50	43.082	-11.703	15.011	1.00	57.85	O
ATOM	805	N	ASP	A	51	41.818	-12.223	16.752	1.00	61.02	N
ATOM	807	CA	ASP	A	51	40.540	-12.225	16.037	1.00	59.60	C
ATOM	809	CB	ASP	A	51	39.472	-12.905	16.896	1.00	62.57	C

ATOM	812	CG	ASP	A	51	38.272	-13.445	16.079	1.00	61.90	C
ATOM	813	OD1	ASP	A	51	38.043	-13.027	14.914	1.00	53.66	O
ATOM	814	OD2	ASP	A	51	37.498	-14.330	16.570	1.00	65.06	O
ATOM	815	C	ASP	A	51	40.013	-10.838	15.775	1.00	57.33	C
ATOM	816	O	ASP	A	51	39.564	-10.219	16.717	1.00	59.76	O
ATOM	817	N	LEU	A	52	39.985	-10.397	14.519	1.00	54.26	N
ATOM	819	CA	LEU	A	52	39.331	-9.145	14.121	1.00	52.34	C
ATOM	821	CB	LEU	A	52	40.119	-8.415	13.029	1.00	49.67	C
ATOM	824	CG	LEU	A	52	41.456	-7.893	13.423	1.00	50.34	C
ATOM	826	CD1	LEU	A	52	42.092	-7.459	12.115	1.00	49.85	C
ATOM	830	CD2	LEU	A	52	41.305	-6.728	14.427	1.00	50.52	C
ATOM	834	C	LEU	A	52	37.948	-9.321	13.542	1.00	51.96	C
ATOM	835	O	LEU	A	52	37.444	-8.450	12.848	1.00	50.66	O
ATOM	836	N	SER	A	53	37.293	-10.399	13.864	1.00	54.16	N
ATOM	838	CA	SER	A	53	36.003	-10.618	13.274	1.00	54.53	C
ATOM	840	CB	SER	A	53	35.526	-12.042	13.555	1.00	56.90	C
ATOM	843	OG	SER	A	53	35.460	-12.203	14.922	1.00	58.05	O
ATOM	845	C	SER	A	53	34.947	-9.619	13.758	1.00	55.01	C
ATOM	846	O	SER	A	53	33.897	-9.595	13.168	1.00	56.80	O
ATOM	847	N	PHE	A	54	35.168	-8.820	14.802	1.00	54.98	N
ATOM	849	CA	PHE	A	54	34.142	-7.845	15.190	1.00	55.18	C
ATOM	851	CB	PHE	A	54	34.467	-7.156	16.478	1.00	55.26	C
ATOM	854	CG	PHE	A	54	35.840	-6.619	16.535	1.00	53.23	C
ATOM	855	CD1	PHE	A	54	36.104	-5.318	16.141	1.00	55.25	C
ATOM	857	CE1	PHE	A	54	37.420	-4.754	16.207	1.00	53.92	C
ATOM	859	CZ	PHE	A	54	38.446	-5.524	16.671	1.00	56.11	C
ATOM	861	CE2	PHE	A	54	38.166	-6.801	17.085	1.00	54.50	C
ATOM	863	CD2	PHE	A	54	36.883	-7.395	16.974	1.00	53.07	C
ATOM	865	C	PHE	A	54	33.936	-6.763	14.167	1.00	54.02	C
ATOM	866	O	PHE	A	54	32.946	-6.016	14.274	1.00	56.54	O
ATOM	867	N	LEU	A	55	34.895	-6.616	13.233	1.00	51.66	N
ATOM	869	CA	LEU	A	55	34.779	-5.672	12.103	1.00	48.92	C
ATOM	871	CB	LEU	A	55	36.115	-5.550	11.426	1.00	46.55	C
ATOM	874	CG	LEU	A	55	37.205	-5.064	12.318	1.00	46.74	C
ATOM	876	CD1	LEU	A	55	38.490	-5.184	11.621	1.00	45.91	C
ATOM	880	CD2	LEU	A	55	36.962	-3.616	12.600	1.00	47.82	C
ATOM	884	C	LEU	A	55	33.821	-6.095	10.989	1.00	48.78	C
ATOM	885	O	LEU	A	55	33.656	-5.390	9.989	1.00	49.08	O
ATOM	886	N	LYS	A	56	33.230	-7.274	11.090	1.00	50.51	N
ATOM	888	CA	LYS	A	56	32.248	-7.667	10.096	1.00	50.35	C
ATOM	890	CB	LYS	A	56	31.836	-9.114	10.238	1.00	52.48	C
ATOM	893	CG	LYS	A	56	32.973	-10.132	10.110	1.00	53.73	C
ATOM	896	CD	LYS	A	56	32.484	-11.607	9.798	1.00	58.55	C
ATOM	899	CE	LYS	A	56	33.628	-12.680	9.390	1.00	59.21	C
ATOM	902	NZ	LYS	A	56	33.071	-13.963	8.832	1.00	61.23	N
ATOM	906	C	LYS	A	56	31.048	-6.741	10.221	1.00	50.84	C
ATOM	907	O	LYS	A	56	30.296	-6.625	9.287	1.00	51.82	O
ATOM	908	N	THR	A	57	30.905	-6.036	11.339	1.00	51.04	N
ATOM	910	CA	THR	A	57	29.736	-5.205	11.583	1.00	52.25	C
ATOM	912	CB	THR	A	57	29.699	-4.985	13.031	1.00	53.38	C
ATOM	914	OG1	THR	A	57	29.273	-6.173	13.594	1.00	54.50	O
ATOM	916	CG2	THR	A	57	28.567	-4.211	13.417	1.00	58.64	C
ATOM	920	C	THR	A	57	29.757	-3.823	10.876	1.00	50.73	C
ATOM	921	O	THR	A	57	28.726	-3.142	10.690	1.00	50.93	O
ATOM	922	N	ILE	A	58	30.947	-3.412	10.510	1.00	48.03	N
ATOM	924	CA	ILE	A	58	31.102	-2.105	10.062	1.00	47.21	C
ATOM	926	CB	ILE	A	58	32.545	-1.755	10.092	1.00	45.62	C
ATOM	928	CG1	ILE	A	58	32.947	-1.611	11.543	1.00	47.30	C
ATOM	931	CD1	ILE	A	58	34.431	-1.176	11.687	1.00	48.07	C
ATOM	935	CG2	ILE	A	58	32.779	-0.361	9.424	1.00	45.43	C
ATOM	939	C	ILE	A	58	30.472	-1.946	8.683	1.00	46.76	C
ATOM	940	O	ILE	A	58	30.884	-2.571	7.729	1.00	46.94	O
ATOM	941	N	GLN	A	59	29.457	-1.091	8.633	1.00	47.32	N
ATOM	943	CA	GLN	A	59	28.765	-0.744	7.433	1.00	46.32	C
ATOM	945	CB	GLN	A	59	27.308	-0.535	7.789	1.00	49.40	C
ATOM	948	CG	GLN	A	59	26.460	-1.801	7.748	1.00	50.88	C
ATOM	951	CD	GLN	A	59	25.154	-1.630	8.490	1.00	56.62	C
ATOM	952	OE1	GLN	A	59	24.282	-0.851	8.084	1.00	61.17	O

ATOM	953	NE2	GLN	A	59	25.029	-2.319	9.621	1.00	62.39	N
ATOM	956	C	GLN	A	59	29.328	0.491	6.793	1.00	43.74	C
ATOM	957	O	GLN	A	59	29.321	0.621	5.609	1.00	42.04	O
ATOM	958	N	GLU	A	60	29.790	1.437	7.575	1.00	43.80	N
ATOM	960	CA	GLU	A	60	30.199	2.713	6.964	1.00	43.43	C
ATOM	962	CB	GLU	A	60	28.983	3.525	6.485	1.00	45.57	C
ATOM	965	CG	GLU	A	60	27.904	3.828	7.486	1.00	49.95	C
ATOM	968	CD	GLU	A	60	26.781	4.755	6.943	1.00	55.76	C
ATOM	969	OE1	GLU	A	60	25.747	4.155	6.484	1.00	53.00	O
ATOM	970	OE2	GLU	A	60	26.933	6.058	7.002	1.00	55.62	O
ATOM	971	C	GLU	A	60	31.110	3.560	7.813	1.00	41.36	C
ATOM	972	O	GLU	A	60	31.060	3.489	8.959	1.00	41.52	O
ATOM	973	N	VAL	A	61	31.956	4.343	7.171	1.00	40.34	N
ATOM	975	CA	VAL	A	61	32.955	5.212	7.787	1.00	40.06	C
ATOM	977	CB	VAL	A	61	34.383	4.620	7.589	1.00	38.27	C
ATOM	979	CG1	VAL	A	61	35.479	5.597	8.136	1.00	38.94	C
ATOM	983	CG2	VAL	A	61	34.453	3.245	8.246	1.00	36.00	C
ATOM	987	C	VAL	A	61	32.892	6.673	7.263	1.00	41.13	C
ATOM	988	O	VAL	A	61	33.035	7.009	6.073	1.00	40.36	O
ATOM	989	N	ALA	A	62	32.717	7.588	8.167	1.00	43.43	N
ATOM	991	CA	ALA	A	62	32.644	8.993	7.741	1.00	44.23	C
ATOM	993	CB	ALA	A	62	32.068	9.827	8.844	1.00	45.33	C
ATOM	997	C	ALA	A	62	34.000	9.548	7.301	1.00	42.41	C
ATOM	998	O	ALA	A	62	34.058	10.357	6.397	1.00	43.72	O
ATOM	999	N	GLY	A	63	35.062	9.160	7.984	1.00	41.42	N
ATOM	1001	CA	GLY	A	63	36.337	9.844	7.875	1.00	41.84	C
ATOM	1004	C	GLY	A	63	37.229	9.070	6.951	1.00	40.75	C
ATOM	1005	O	GLY	A	63	36.820	8.695	5.882	1.00	40.21	O
ATOM	1006	N	TYR	A	64	38.425	8.717	7.359	1.00	40.83	N
ATOM	1008	CA	TYR	A	64	39.185	7.771	6.561	1.00	39.12	C
ATOM	1010	CB	TYR	A	64	40.559	8.330	6.344	1.00	40.77	C
ATOM	1013	CG	TYR	A	64	41.366	8.605	7.595	1.00	40.87	C
ATOM	1014	CD1	TYR	A	64	42.182	7.617	8.184	1.00	42.70	C
ATOM	1016	CE1	TYR	A	64	42.969	7.892	9.305	1.00	44.16	C
ATOM	1018	CZ	TYR	A	64	42.910	9.171	9.833	1.00	42.92	C
ATOM	1019	OH	TYR	A	64	43.627	9.512	10.935	1.00	43.56	O
ATOM	1021	CE2	TYR	A	64	42.090	10.108	9.279	1.00	43.84	C
ATOM	1023	CD2	TYR	A	64	41.353	9.838	8.153	1.00	43.12	C
ATOM	1025	C	TYR	A	64	39.325	6.394	7.210	1.00	39.09	C
ATOM	1026	O	TYR	A	64	39.007	6.183	8.369	1.00	40.13	O
ATOM	1027	N	VAL	A	65	39.833	5.469	6.425	1.00	37.79	N
ATOM	1029	CA	VAL	A	65	40.165	4.157	6.845	1.00	37.58	C
ATOM	1031	CB	VAL	A	65	39.451	3.155	5.959	1.00	36.44	C
ATOM	1033	CG1	VAL	A	65	39.941	1.695	6.176	1.00	35.49	C
ATOM	1037	CG2	VAL	A	65	38.020	3.234	6.276	1.00	38.10	C
ATOM	1041	C	VAL	A	65	41.665	4.017	6.681	1.00	38.37	C
ATOM	1042	O	VAL	A	65	42.169	4.112	5.579	1.00	38.62	O
ATOM	1043	N	LEU	A	66	42.377	3.760	7.760	1.00	38.89	N
ATOM	1045	CA	LEU	A	66	43.750	3.428	7.621	1.00	40.32	C
ATOM	1047	CB	LEU	A	66	44.519	4.432	8.405	1.00	42.88	C
ATOM	1050	CG	LEU	A	66	45.904	4.043	8.875	1.00	45.09	C
ATOM	1052	CD1	LEU	A	66	46.821	3.880	7.728	1.00	44.69	C
ATOM	1056	CD2	LEU	A	66	46.373	5.153	9.836	1.00	48.02	C
ATOM	1060	C	LEU	A	66	44.042	2.058	8.155	1.00	40.80	C
ATOM	1061	O	LEU	A	66	43.832	1.757	9.314	1.00	42.77	O
ATOM	1062	N	ILE	A	67	44.576	1.198	7.326	1.00	40.95	N
ATOM	1064	CA	ILE	A	67	45.001	-0.132	7.747	1.00	40.61	C
ATOM	1066	CB	ILE	A	67	44.324	-1.113	6.861	1.00	39.42	C
ATOM	1068	CG1	ILE	A	67	42.836	-1.076	7.096	1.00	37.05	C
ATOM	1071	CD1	ILE	A	67	42.129	-1.575	5.966	1.00	36.61	C
ATOM	1075	CG2	ILE	A	67	44.845	-2.486	7.132	1.00	42.01	C
ATOM	1079	C	ILE	A	67	46.526	-0.226	7.596	1.00	42.09	C
ATOM	1080	O	ILE	A	67	47.035	-0.356	6.481	1.00	42.06	O
ATOM	1081	N	ALA	A	68	47.252	-0.097	8.693	1.00	43.71	N
ATOM	1083	CA	ALA	A	68	48.691	-0.174	8.634	1.00	46.04	C
ATOM	1085	CB	ALA	A	68	49.231	1.175	8.518	1.00	46.74	C
ATOM	1089	C	ALA	A	68	49.421	-0.962	9.771	1.00	48.21	C
ATOM	1090	O	ALA	A	68	48.939	-1.126	10.901	1.00	47.90	O

ATOM	1091	N	LEU	A	69	50.597	-1.464	9.396	1.00	50.08	N
ATOM	1093	CA	LEU	A	69	51.542	-2.143	10.292	1.00	52.36	C
ATOM	1095	CB	LEU	A	69	52.199	-1.127	11.234	1.00	53.98	C
ATOM	1098	CG	LEU	A	69	52.815	0.105	10.537	1.00	54.54	C
ATOM	1100	CD1	LEU	A	69	53.048	1.269	11.481	1.00	55.84	C
ATOM	1104	CD2	LEU	A	69	54.114	-0.210	9.926	1.00	56.72	C
ATOM	1108	C	LEU	A	69	50.917	-3.355	10.993	1.00	51.43	C
ATOM	1109	O	LEU	A	69	51.253	-3.718	12.102	1.00	52.82	O
ATOM	1110	N	ASN	A	70	50.034	-3.989	10.254	1.00	49.53	N
ATOM	1112	CA	ASN	A	70	49.288	-5.146	10.709	1.00	49.78	C
ATOM	1114	CB	ASN	A	70	47.887	-5.148	10.071	1.00	47.45	C
ATOM	1117	CG	ASN	A	70	47.025	-4.054	10.557	1.00	45.01	C
ATOM	1118	OD1	ASN	A	70	46.654	-4.043	11.719	1.00	45.13	O
ATOM	1119	ND2	ASN	A	70	46.719	-3.102	9.690	1.00	43.78	N
ATOM	1122	C	ASN	A	70	49.990	-6.380	10.192	1.00	51.18	C
ATOM	1123	O	ASN	A	70	50.449	-6.375	9.044	1.00	50.13	O
ATOM	1124	N	THR	A	71	50.106	-7.425	11.001	1.00	53.00	N
ATOM	1126	CA	THR	A	71	50.513	-8.709	10.427	1.00	55.45	C
ATOM	1128	CB	THR	A	71	51.718	-9.356	11.116	1.00	58.70	C
ATOM	1130	OG1	THR	A	71	51.432	-9.593	12.492	1.00	59.65	O
ATOM	1132	CG2	THR	A	71	52.909	-8.463	11.068	1.00	60.02	C
ATOM	1136	C	THR	A	71	49.382	-9.714	10.440	1.00	55.26	C
ATOM	1137	O	THR	A	71	49.550	-10.818	9.952	1.00	55.74	O
ATOM	1138	N	VAL	A	72	48.242	-9.316	11.005	1.00	53.94	N
ATOM	1140	CA	VAL	A	72	47.114	-10.219	11.120	1.00	53.04	C
ATOM	1142	CB	VAL	A	72	45.909	-9.515	11.839	1.00	51.69	C
ATOM	1144	CG1	VAL	A	72	45.385	-8.312	11.059	1.00	47.61	C
ATOM	1148	CG2	VAL	A	72	44.786	-10.530	12.214	1.00	51.56	C
ATOM	1152	C	VAL	A	72	45.800	-10.776	9.727	1.00	51.50	C
ATOM	1153	O	VAL	A	72	45.332	-10.096	8.734	1.00	50.25	O
ATOM	1154	N	GLU	A	73	46.456	-12.047	9.672	1.00	53.42	N
ATOM	1156	CA	GLU	A	73	46.307	-12.720	8.413	1.00	53.56	C
ATOM	1158	CB	GLU	A	73	46.091	-14.219	8.575	1.00	55.45	C
ATOM	1161	CG	GLU	A	73	46.005	-14.829	7.190	1.00	57.21	C
ATOM	1164	CD	GLU	A	73	46.159	-16.328	7.121	1.00	65.02	C
ATOM	1165	OE1	GLU	A	73	46.539	-16.914	8.248	1.00	68.29	O
ATOM	1166	OE2	GLU	A	73	45.894	-16.869	5.933	1.00	62.47	O
ATOM	1167	C	GLU	A	73	45.169	-12.057	7.647	1.00	51.07	C
ATOM	1168	O	GLU	A	73	45.351	-11.655	6.539	1.00	49.97	O
ATOM	1169	N	ARG	A	74	44.011	-11.888	8.257	1.00	50.85	N
ATOM	1171	CA	ARG	A	74	42.877	-11.303	7.545	1.00	49.00	C
ATOM	1173	CB	ARG	A	74	41.874	-12.437	7.294	1.00	49.93	C
ATOM	1176	CG	ARG	A	74	40.411	-12.118	7.396	1.00	51.98	C
ATOM	1179	CD	ARG	A	74	39.468	-13.326	7.038	1.00	54.93	C
ATOM	1182	NE	ARG	A	74	39.084	-13.105	5.645	1.00	59.31	N
ATOM	1184	CZ	ARG	A	74	38.269	-13.895	4.959	1.00	62.52	C
ATOM	1185	NH1	ARG	A	74	37.762	-14.941	5.616	1.00	65.45	N
ATOM	1188	NH2	ARG	A	74	37.967	-13.648	3.635	1.00	58.43	N
ATOM	1191	C	ARG	A	74	42.266	-10.058	8.264	1.00	46.63	C
ATOM	1192	O	ARG	A	74	42.386	-9.919	9.436	1.00	46.29	O
ATOM	1193	N	ILE	A	75	41.684	-9.133	7.517	1.00	44.98	N
ATOM	1195	CA	ILE	A	75	40.955	-7.991	8.086	1.00	43.65	C
ATOM	1197	CB	ILE	A	75	41.725	-6.736	7.884	1.00	42.04	C
ATOM	1199	CG1	ILE	A	75	42.831	-6.684	8.929	1.00	43.21	C
ATOM	1202	CD1	ILE	A	75	44.040	-5.756	8.633	1.00	42.89	C
ATOM	1206	CG2	ILE	A	75	40.805	-5.538	8.084	1.00	42.87	C
ATOM	1210	C	ILE	A	75	39.538	-7.913	7.476	1.00	42.35	C
ATOM	1211	O	ILE	A	75	39.350	-7.353	6.451	1.00	39.45	O
ATOM	1212	N	PRO	A	76	38.576	-8.592	8.099	1.00	43.86	N
ATOM	1213	CA	PRO	A	76	37.285	-8.857	7.461	1.00	43.31	C
ATOM	1215	CB	PRO	A	76	36.796	-10.049	8.210	1.00	43.97	C
ATOM	1218	CG	PRO	A	76	37.340	-9.772	9.568	1.00	45.76	C
ATOM	1221	CD	PRO	A	76	38.691	-9.247	9.406	1.00	44.45	C
ATOM	1224	C	PRO	A	76	36.324	-7.728	7.568	1.00	42.78	C
ATOM	1225	O	PRO	A	76	35.396	-7.831	8.333	1.00	45.44	O
ATOM	1226	N	LEU	A	77	36.535	-6.697	6.748	1.00	41.49	N
ATOM	1228	CA	LEU	A	77	35.641	-5.567	6.537	1.00	39.87	C
ATOM	1230	CB	LEU	A	77	36.546	-4.409	6.198	1.00	38.77	C

ATOM	1233	CG	LEU	A	77	37.158	-3.827	7.512	1.00	41.18	C
ATOM	1235	CD1	LEU	A	77	38.215	-2.809	7.271	1.00	41.61	C
ATOM	1239	CD2	LEU	A	77	36.111	-3.156	8.502	1.00	40.56	C
ATOM	1243	C	LEU	A	77	34.637	-5.929	5.427	1.00	41.28	C
ATOM	1244	O	LEU	A	77	34.447	-5.251	4.413	1.00	42.53	O
ATOM	1245	N	GLU	A	78	33.972	-7.055	5.647	1.00	43.65	N
ATOM	1247	CA	GLU	A	78	33.051	-7.679	4.726	1.00	44.72	C
ATOM	1249	CB	GLU	A	78	32.625	-9.074	5.243	1.00	47.90	C
ATOM	1252	CG	GLU	A	78	33.638	-10.261	5.125	1.00	49.04	C
ATOM	1255	CD	GLU	A	78	33.290	-11.463	6.010	1.00	57.37	C
ATOM	1256	OE1	GLU	A	78	32.198	-11.438	6.698	1.00	60.60	O
ATOM	1257	OE2	GLU	A	78	34.099	-12.458	6.053	1.00	64.67	O
ATOM	1258	C	GLU	A	78	31.804	-6.852	4.471	1.00	45.32	C
ATOM	1259	O	GLU	A	78	31.180	-7.118	3.483	1.00	48.23	O
ATOM	1260	N	ASN	A	79	31.427	-5.864	5.300	1.00	45.00	N
ATOM	1262	CA	ASN	A	79	30.167	-5.128	5.064	1.00	45.06	C
ATOM	1264	CB	ASN	A	79	29.175	-5.520	6.123	1.00	47.94	C
ATOM	1267	CG	ASN	A	79	28.893	-7.032	6.112	1.00	46.44	C
ATOM	1268	OD1	ASN	A	79	28.282	-7.536	5.190	1.00	48.09	O
ATOM	1269	ND2	ASN	A	79	29.350	-7.723	7.101	1.00	45.47	N
ATOM	1272	C	ASN	A	79	30.263	-3.572	4.936	1.00	44.03	C
ATOM	1273	O	ASN	A	79	29.243	-2.882	4.734	1.00	44.31	O
ATOM	1274	N	LEU	A	80	31.505	-3.086	4.968	1.00	41.14	N
ATOM	1276	CA	LEU	A	80	31.853	-1.726	4.783	1.00	39.81	C
ATOM	1278	CB	LEU	A	80	33.381	-1.607	4.910	1.00	35.95	C
ATOM	1281	CG	LEU	A	80	33.900	-0.184	4.736	1.00	39.21	C
ATOM	1283	CD1	LEU	A	80	33.164	0.825	5.606	1.00	37.81	C
ATOM	1287	CD2	LEU	A	80	35.397	0.048	4.966	1.00	41.93	C
ATOM	1291	C	LEU	A	80	31.377	-1.250	3.421	1.00	40.93	C
ATOM	1292	O	LEU	A	80	32.049	-1.496	2.469	1.00	42.60	O
ATOM	1293	N	GLN	A	81	30.255	-0.537	3.300	1.00	42.84	N
ATOM	1295	CA	GLN	A	81	29.796	-0.098	1.984	1.00	43.93	C
ATOM	1297	CB	GLN	A	81	28.269	0.058	1.841	1.00	46.43	C
ATOM	1300	CG	GLN	A	81	27.410	-0.770	2.822	1.00	53.59	C
ATOM	1303	CD	GLN	A	81	25.871	-0.694	2.613	1.00	59.31	C
ATOM	1304	OE1	GLN	A	81	25.397	-0.526	1.466	1.00	64.23	O
ATOM	1305	NE2	GLN	A	81	25.105	-0.867	3.707	1.00	58.31	N
ATOM	1308	C	GLN	A	81	30.427	1.192	1.574	1.00	43.10	C
ATOM	1309	O	GLN	A	81	30.399	1.526	0.406	1.00	44.40	O
ATOM	1310	N	ILE	A	82	30.926	1.983	2.500	1.00	42.20	N
ATOM	1312	CA	ILE	A	82	31.227	3.374	2.148	1.00	41.78	C
ATOM	1314	CB	ILE	A	82	29.952	4.210	2.093	1.00	43.88	C
ATOM	1316	CG1	ILE	A	82	30.226	5.693	1.936	1.00	44.99	C
ATOM	1319	CD1	ILE	A	82	28.980	6.417	1.322	1.00	47.81	C
ATOM	1323	CG2	ILE	A	82	29.181	4.105	3.300	1.00	46.56	C
ATOM	1327	C	ILE	A	82	32.123	4.000	3.099	1.00	40.42	C
ATOM	1328	O	ILE	A	82	31.890	3.965	4.277	1.00	40.10	O
ATOM	1329	N	ILE	A	83	33.149	4.590	2.559	1.00	40.78	N
ATOM	1331	CA	ILE	A	83	33.982	5.550	3.268	1.00	41.60	C
ATOM	1333	CB	ILE	A	83	35.472	5.198	2.997	1.00	40.44	C
ATOM	1335	CG1	ILE	A	83	35.765	3.848	3.622	1.00	40.01	C
ATOM	1338	CD1	ILE	A	83	36.743	3.034	2.815	1.00	42.41	C
ATOM	1342	CG2	ILE	A	83	36.410	6.236	3.487	1.00	38.30	C
ATOM	1346	C	ILE	A	83	33.669	6.893	2.695	1.00	42.50	C
ATOM	1347	O	ILE	A	83	33.999	7.150	1.579	1.00	43.19	O
ATOM	1348	N	ARG	A	84	33.018	7.761	3.415	1.00	44.85	N
ATOM	1350	CA	ARG	A	84	32.956	9.181	2.954	1.00	47.16	C
ATOM	1352	CB	ARG	A	84	31.957	9.935	3.837	1.00	48.61	C
ATOM	1355	CG	ARG	A	84	30.620	9.238	4.016	1.00	46.73	C
ATOM	1358	CD	ARG	A	84	29.729	9.845	5.062	1.00	47.11	C
ATOM	1361	NE	ARG	A	84	28.625	8.937	5.218	1.00	49.65	N
ATOM	1363	CZ	ARG	A	84	27.542	8.873	4.460	1.00	52.43	C
ATOM	1364	NH1	ARG	A	84	27.321	9.737	3.523	1.00	56.44	N
ATOM	1367	NH2	ARG	A	84	26.651	7.905	4.649	1.00	56.44	N
ATOM	1370	C	ARG	A	84	34.366	9.791	3.133	1.00	47.81	C
ATOM	1371	O	ARG	A	84	35.119	9.296	3.931	1.00	49.72	O
ATOM	1372	N	GLY	A	85	34.798	10.845	2.512	1.00	49.39	N
ATOM	1374	CA	GLY	A	85	36.098	11.343	3.004	1.00	49.30	C

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ATOM 1377  C   GLY A  85      36.067  12.641   3.784  1.00 51.38           C
ATOM 1378  O   GLY A  85      36.672  13.702   3.350  1.00 54.87           O
ATOM 1379  N   ASN A  86      35.350  12.634   4.894  1.00 50.44           N
ATOM 1381  CA  ASN A  86      35.247  13.909   5.616  1.00 53.16           C
ATOM 1383  CB  ASN A  86      34.137  13.970   6.662  1.00 54.49           C
ATOM 1386  CG  ASN A  86      32.855  13.473   6.133  1.00 56.57           C
ATOM 1387  OD1 ASN A  86      32.589  13.516   4.880  1.00 57.07           O
ATOM 1388  ND2 ASN A  86      32.041  12.937   7.053  1.00 58.10           N
ATOM 1391  C   ASN A  86      36.544  14.299   6.243  1.00 52.27           C
ATOM 1392  O   ASN A  86      36.736  15.441   6.387  1.00 54.97           O
ATOM 1393  N   MET A  87      37.376  13.355   6.672  1.00 49.69           N
ATOM 1395  CA  MET A  87      38.812  13.569   6.874  1.00 50.28           C
ATOM 1397  CB  MET A  87      39.369  13.214   8.246  1.00 50.21           C
ATOM 1400  CG  MET A  87      38.562  13.459   9.436  1.00 54.83           C
ATOM 1403  SD  MET A  87      39.259  14.846  10.126  1.00 63.81           S
ATOM 1404  CE  MET A  87      38.913  15.937   8.831  1.00 64.30           C
ATOM 1408  C   MET A  87      39.563  12.647   5.990  1.00 48.04           C
ATOM 1409  O   MET A  87      39.001  11.677   5.499  1.00 46.37           O
ATOM 1410  N   TYR A  88      40.857  12.939   5.889  1.00 49.45           N
ATOM 1412  CA  TYR A  88      41.828  12.188   5.123  1.00 49.57           C
ATOM 1414  CB  TYR A  88      42.405  13.024   3.985  1.00 50.98           C
ATOM 1417  CG  TYR A  88      41.429  13.553   2.930  1.00 53.15           C
ATOM 1418  CD1 TYR A  88      41.227  14.877   2.711  1.00 57.66           C
ATOM 1420  CE1 TYR A  88      40.400  15.281   1.763  1.00 56.97           C
ATOM 1422  CZ  TYR A  88      39.767  14.410   0.984  1.00 52.93           C
ATOM 1423  OH  TYR A  88      38.880  14.736   0.021  1.00 53.52           O
ATOM 1425  CE2 TYR A  88      39.952  13.177   1.150  1.00 52.34           C
ATOM 1427  CD2 TYR A  88      40.787  12.717   2.112  1.00 54.43           C
ATOM 1429  C   TYR A  88      43.005  11.772   5.994  1.00 50.38           C
ATOM 1430  O   TYR A  88      43.540  12.623   6.636  1.00 51.81           O
ATOM 1431  N   TYR A  89      43.461  10.494   6.003  1.00 49.68           N
ATOM 1433  CA  TYR A  89      44.851  10.226   6.458  1.00 51.12           C
ATOM 1435  CB  TYR A  89      45.199   8.793   6.230  1.00 48.69           C
ATOM 1438  CG  TYR A  89      46.550   8.377   6.698  1.00 49.97           C
ATOM 1439  CD1 TYR A  89      46.788   8.184   7.998  1.00 52.94           C
ATOM 1441  CE1 TYR A  89      48.046   7.787   8.456  1.00 54.76           C
ATOM 1443  CZ  TYR A  89      49.063   7.565   7.595  1.00 53.29           C
ATOM 1444  OH  TYR A  89      50.254   7.164   8.142  1.00 54.86           O
ATOM 1446  CE2 TYR A  89      48.855   7.728   6.279  1.00 52.09           C
ATOM 1448  CD2 TYR A  89      47.581   8.133   5.832  1.00 52.11           C
ATOM 1450  C   TYR A  89      45.758  11.121   5.592  1.00 54.75           C
ATOM 1451  O   TYR A  89      45.311  11.553   4.499  1.00 57.07           O
ATOM 1452  N   GLU A  90      46.990  11.416   6.012  1.00 56.38           N
ATOM 1454  CA  GLU A  90      47.978  12.129   5.116  1.00 58.43           C
ATOM 1456  CB  GLU A  90      49.394  11.443   5.224  1.00 60.02           C
ATOM 1459  CG  GLU A  90      49.655  10.346   4.183  1.00 63.93           C
ATOM 1462  CD  GLU A  90      51.108   9.763   4.087  1.00 72.04           C
ATOM 1463  OE1 GLU A  90      52.082  10.496   4.526  1.00 73.67           O
ATOM 1464  OE2 GLU A  90      51.246   8.551   3.534  1.00 70.25           O
ATOM 1465  C   GLU A  90      47.584  12.478   3.607  1.00 56.72           C
ATOM 1466  O   GLU A  90      47.069  11.643   2.909  1.00 53.74           O
ATOM 1467  N   ASN A  91      47.844  13.712   3.136  1.00 59.85           N
ATOM 1469  CA  ASN A  91      47.846  14.086   1.691  1.00 61.10           C
ATOM 1471  CB  ASN A  91      48.956  13.309   0.852  1.00 62.38           C
ATOM 1474  CG  ASN A  91      50.403  13.342   1.452  1.00 66.43           C
ATOM 1475  OD1 ASN A  91      51.269  14.148   1.040  1.00 66.35           O
ATOM 1476  ND2 ASN A  91      50.692  12.379   2.344  1.00 68.77           N
ATOM 1479  C   ASN A  91      46.511  13.735   1.008  1.00 57.87           C
ATOM 1480  O   ASN A  91      46.489  13.144  -0.104  1.00 58.73           O
ATOM 1481  N   SER A  92      45.373  13.936   1.639  1.00 54.13           N
ATOM 1483  CA  SER A  92      44.142  13.510   0.901  1.00 50.01           C
ATOM 1485  CB  SER A  92      43.991  14.441  -0.308  1.00 53.39           C
ATOM 1488  OG  SER A  92      44.397  13.795  -1.479  1.00 55.51           O
ATOM 1490  C   SER A  92      43.861  11.994   0.390  1.00 45.90           C
ATOM 1491  O   SER A  92      43.244  11.776  -0.632  1.00 45.63           O
ATOM 1492  N   TYR A  93      44.238  11.012   1.185  1.00 44.30           N
ATOM 1494  CA  TYR A  93      43.804   9.637   0.991  1.00 42.94           C
ATOM 1496  CB  TYR A  93      44.955   8.620   1.158  1.00 41.72           C
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ATOM 1499  CG  TYR A  93      46.166   8.787   0.278  1.00 43.87           C
ATOM 1500  CD1 TYR A  93      47.407   9.146   0.829  1.00 46.10           C
ATOM 1502  CE1 TYR A  93      48.541   9.327   0.012  1.00 50.76           C
ATOM 1504  CZ  TYR A  93      48.439   9.139  -1.371  1.00 48.97           C
ATOM 1505  OH  TYR A  93      49.527   9.284  -2.159  1.00 51.85           O
ATOM 1507  CE2 TYR A  93      47.228   8.775  -1.937  1.00 47.04           C
ATOM 1509  CD2 TYR A  93      46.087   8.588  -1.104  1.00 44.48           C
ATOM 1511  C   TYR A  93      42.754   9.357   2.068  1.00 42.52           C
ATOM 1512  O   TYR A  93      43.009   9.539   3.289  1.00 42.34           O
ATOM 1513  N   ALA A  94      41.585   8.947   1.581  1.00 42.12           N
ATOM 1515  CA  ALA A  94      40.467   8.458   2.386  1.00 41.29           C
ATOM 1517  CB  ALA A  94      39.124   8.712   1.688  1.00 41.93           C
ATOM 1521  C   ALA A  94      40.538   7.046   2.741  1.00 36.58           C
ATOM 1522  O   ALA A  94      39.832   6.652   3.648  1.00 38.88           O
ATOM 1523  N   LEU A  95      41.322   6.287   1.976  1.00 37.35           N
ATOM 1525  CA  LEU A  95      41.677   4.889   2.345  1.00 36.53           C
ATOM 1527  CB  LEU A  95      40.838   3.878   1.575  1.00 35.59           C
ATOM 1530  CG  LEU A  95      41.249   2.405   1.730  1.00 38.72           C
ATOM 1532  CD1 LEU A  95      40.952   1.856   3.092  1.00 38.41           C
ATOM 1536  CD2 LEU A  95      40.553   1.538   0.725  1.00 40.76           C
ATOM 1540  C   LEU A  95      43.155   4.620   2.097  1.00 36.96           C
ATOM 1541  O   LEU A  95      43.702   4.902   1.040  1.00 36.85           O
ATOM 1542  N   ALA A  96      43.811   4.030   3.064  1.00 36.75           N
ATOM 1544  CA  ALA A  96      45.256   3.954   2.964  1.00 39.78           C
ATOM 1546  CB  ALA A  96      45.925   5.164   3.605  1.00 41.49           C
ATOM 1550  C   ALA A  96      45.666   2.689   3.629  1.00 40.17           C
ATOM 1551  O   ALA A  96      45.306   2.465   4.723  1.00 39.98           O
ATOM 1552  N   VAL A  97      46.352   1.827   2.908  1.00 41.75           N
ATOM 1554  CA  VAL A  97      46.585   0.484   3.341  1.00 42.09           C
ATOM 1556  CB  VAL A  97      45.788  -0.476   2.463  1.00 41.49           C
ATOM 1558  CG1 VAL A  97      46.026  -1.918   2.852  1.00 42.14           C
ATOM 1562  CG2 VAL A  97      44.323  -0.177   2.615  1.00 41.22           C
ATOM 1566  C   VAL A  97      48.086   0.352   3.161  1.00 44.34           C
ATOM 1567  O   VAL A  97      48.554   0.134   2.051  1.00 45.40           O
ATOM 1568  N   LEU A  98      48.818   0.528   4.272  1.00 45.17           N
ATOM 1570  CA  LEU A  98      50.276   0.703   4.325  1.00 46.32           C
ATOM 1572  CB  LEU A  98      50.596   2.056   4.941  1.00 47.45           C
ATOM 1575  CG  LEU A  98      49.900   3.267   4.427  1.00 46.46           C
ATOM 1577  CD1 LEU A  98      50.711   4.432   4.845  1.00 49.07           C
ATOM 1581  CD2 LEU A  98      49.804   3.181   2.962  1.00 49.37           C
ATOM 1585  C   LEU A  98      51.052  -0.301   5.190  1.00 46.58           C
ATOM 1586  O   LEU A  98      50.744  -0.562   6.346  1.00 44.34           O
ATOM 1587  N   SER A  99      52.121  -0.774   4.585  1.00 48.54           N
ATOM 1589  CA  SER A  99      53.196  -1.505   5.215  1.00 51.61           C
ATOM 1591  CB  SER A  99      54.303  -0.529   5.593  1.00 54.70           C
ATOM 1594  OG  SER A  99      53.951   0.131   6.737  1.00 56.30           O
ATOM 1596  C   SER A  99      52.781  -2.478   6.314  1.00 50.51           C
ATOM 1597  O   SER A  99      53.385  -2.555   7.367  1.00 51.44           O
ATOM 1598  N   ASN A 100      51.810  -3.301   5.909  1.00 48.91           N
ATOM 1600  CA  ASN A 100      51.163  -4.336   6.673  1.00 48.16           C
ATOM 1602  CB  ASN A 100      49.731  -4.596   6.150  1.00 45.34           C
ATOM 1605  CG  ASN A 100      48.753  -3.488   6.537  1.00 43.98           C
ATOM 1606  OD1 ASN A 100      48.493  -3.220   7.752  1.00 44.49           O
ATOM 1607  ND2 ASN A 100      48.219  -2.820   5.529  1.00 40.05           N
ATOM 1610  C   ASN A 100      51.948  -5.611   6.590  1.00 50.03           C
ATOM 1611  O   ASN A 100      51.466  -6.581   6.059  1.00 49.67           O
ATOM 1612  N   TYR A 101      53.167  -5.561   7.095  1.00 52.63           N
ATOM 1614  CA  TYR A 101      54.057  -6.682   7.206  1.00 55.81           C
ATOM 1616  CB  TYR A 101      54.935  -6.876   5.957  1.00 57.44           C
ATOM 1619  CG  TYR A 101      55.910  -5.739   5.711  1.00 61.09           C
ATOM 1620  CD1 TYR A 101      57.282  -5.915   5.822  1.00 65.26           C
ATOM 1622  CE1 TYR A 101      58.178  -4.835   5.598  1.00 67.71           C
ATOM 1624  CZ  TYR A 101      57.689  -3.571   5.279  1.00 66.52           C
ATOM 1625  OH  TYR A 101      58.504  -2.489   5.080  1.00 66.74           O
ATOM 1627  CE2 TYR A 101      56.339  -3.370   5.169  1.00 63.37           C
ATOM 1629  CD2 TYR A 101      55.450  -4.453   5.380  1.00 61.79           C
ATOM 1631  C   TYR A 101      54.922  -6.375   8.399  1.00 59.02           C
ATOM 1632  O   TYR A 101      54.849  -5.281   8.984  1.00 59.11           O
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ATOM	1633	N	ASP	A	102	55.740	-7.351	8.775	1.00	62.99	N
ATOM	1635	CA	ASP	A	102	56.695	-7.200	9.858	1.00	66.01	C
ATOM	1637	CB	ASP	A	102	56.193	-7.849	11.169	1.00	66.35	C
ATOM	1640	CG	ASP	A	102	56.362	-9.374	11.239	1.00	70.03	C
ATOM	1641	OD1	ASP	A	102	56.452	-10.092	10.212	1.00	73.62	O
ATOM	1642	OD2	ASP	A	102	56.400	-9.961	12.340	1.00	72.18	O
ATOM	1643	C	ASP	A	102	58.069	-7.681	9.459	1.00	69.88	C
ATOM	1644	O	ASP	A	102	58.284	-8.255	8.390	1.00	69.60	O
ATOM	1645	N	ALA	A	103	59.005	-7.382	10.340	1.00	73.77	N
ATOM	1647	CA	ALA	A	103	60.390	-7.786	10.188	1.00	78.79	C
ATOM	1649	CB	ALA	A	103	61.234	-7.388	11.471	1.00	82.44	C
ATOM	1653	C	ALA	A	103	60.469	-9.265	9.936	1.00	80.28	C
ATOM	1654	O	ALA	A	103	61.349	-9.677	9.202	1.00	83.58	O
ATOM	1655	N	ASN	A	104	59.535	-10.036	10.519	1.00	78.84	N
ATOM	1657	CA	ASN	A	104	59.562	-11.517	10.518	1.00	81.30	C
ATOM	1659	CB	ASN	A	104	58.700	-12.058	11.667	1.00	80.83	C
ATOM	1662	CG	ASN	A	104	59.503	-12.368	12.896	1.00	85.11	C
ATOM	1663	OD1	ASN	A	104	60.124	-13.432	12.973	1.00	88.51	O
ATOM	1664	ND2	ASN	A	104	59.490	-11.439	13.881	1.00	83.35	N
ATOM	1667	C	ASN	A	104	59.156	-12.295	9.262	1.00	80.02	C
ATOM	1668	O	ASN	A	104	59.059	-13.525	9.360	1.00	81.89	O
ATOM	1669	N	ALA	A	105	58.967	-11.613	8.120	1.00	77.36	N
ATOM	1671	CA	ALA	A	105	58.482	-12.224	6.874	1.00	76.38	C
ATOM	1673	CB	ALA	A	105	59.452	-13.356	6.374	1.00	80.34	C
ATOM	1677	C	ALA	A	105	57.000	-12.731	6.961	1.00	73.17	C
ATOM	1678	O	ALA	A	105	56.718	-13.889	6.700	1.00	73.97	O
ATOM	1679	N	THR	A	106	56.081	-11.824	7.298	1.00	69.66	N
ATOM	1681	CA	THR	A	106	54.660	-12.097	7.532	1.00	66.80	C
ATOM	1683	CB	THR	A	106	54.297	-12.371	9.047	1.00	68.37	C
ATOM	1685	OG1	THR	A	106	55.307	-13.390	9.523	1.00	72.58	O
ATOM	1687	CG2	THR	A	106	52.978	-12.913	9.329	1.00	67.58	C
ATOM	1691	C	THR	A	106	53.902	-10.812	7.270	1.00	62.45	C
ATOM	1692	O	THR	A	106	54.416	-9.762	7.574	1.00	62.25	O
ATOM	1693	N	GLY	A	107	52.673	-10.886	6.782	1.00	58.72	N
ATOM	1695	CA	GLY	A	107	51.864	-9.712	6.675	1.00	55.00	C
ATOM	1698	C	GLY	A	107	50.400	-9.905	6.384	1.00	53.15	C
ATOM	1699	O	GLY	A	107	49.843	-10.953	6.433	1.00	53.80	O
ATOM	1700	N	LEU	A	108	49.751	-8.814	6.049	1.00	52.41	N
ATOM	1702	CA	LEU	A	108	48.340	-8.814	5.782	1.00	50.68	C
ATOM	1704	CB	LEU	A	108	47.813	-7.395	5.753	1.00	47.39	C
ATOM	1707	CG	LEU	A	108	46.336	-7.409	5.418	1.00	45.14	C
ATOM	1709	CD1	LEU	A	108	45.449	-8.110	6.475	1.00	45.32	C
ATOM	1713	CD2	LEU	A	108	45.931	-5.996	5.325	1.00	43.71	C
ATOM	1717	C	LEU	A	108	48.153	-9.472	4.422	1.00	52.50	C
ATOM	1718	O	LEU	A	108	48.849	-9.151	3.447	1.00	55.00	O
ATOM	1719	N	LYS	A	109	47.179	-10.355	4.355	1.00	52.74	N
ATOM	1721	CA	LYS	A	109	46.955	-11.238	3.229	1.00	53.15	C
ATOM	1723	CB	LYS	A	109	47.638	-12.559	3.644	1.00	55.47	C
ATOM	1726	CG	LYS	A	109	47.261	-13.758	2.850	1.00	58.35	C
ATOM	1729	CD	LYS	A	109	47.898	-15.038	3.348	1.00	64.60	C
ATOM	1732	CE	LYS	A	109	47.531	-16.247	2.344	1.00	68.67	C
ATOM	1735	NZ	LYS	A	109	48.322	-17.517	2.627	1.00	71.64	N
ATOM	1739	C	LYS	A	109	45.472	-11.376	3.326	1.00	51.57	C
ATOM	1740	O	LYS	A	109	45.043	-11.938	4.301	1.00	55.49	O
ATOM	1741	N	GLU	A	110	44.629	-10.868	2.482	1.00	48.33	N
ATOM	1743	CA	GLU	A	110	43.162	-10.946	2.841	1.00	47.27	C
ATOM	1745	CB	GLU	A	110	42.668	-12.235	3.564	1.00	48.52	C
ATOM	1748	CG	GLU	A	110	42.930	-13.571	2.828	1.00	52.86	C
ATOM	1751	CD	GLU	A	110	42.513	-14.864	3.570	1.00	55.78	C
ATOM	1752	OE1	GLU	A	110	41.488	-14.854	4.321	1.00	53.35	O
ATOM	1753	OE2	GLU	A	110	43.190	-15.927	3.337	1.00	63.72	O
ATOM	1754	C	GLU	A	110	42.519	-9.791	3.590	1.00	44.72	C
ATOM	1755	O	GLU	A	110	42.327	-9.843	4.769	1.00	44.16	O
ATOM	1756	N	LEU	A	111	42.058	-8.851	2.780	1.00	42.81	N
ATOM	1758	CA	LEU	A	111	41.322	-7.684	3.153	1.00	41.48	C
ATOM	1760	CB	LEU	A	111	42.164	-6.445	2.787	1.00	40.76	C
ATOM	1763	CG	LEU	A	111	41.578	-5.068	2.935	1.00	39.62	C
ATOM	1765	CD1	LEU	A	111	41.011	-4.863	4.331	1.00	41.72	C

ATOM	1769	CD2	LEU	A	111	42.691	-4.060	2.710	1.00 39.92	C
ATOM	1773	C	LEU	A	111	40.103	-7.645	2.272	1.00 41.38	C
ATOM	1774	O	LEU	A	111	40.014	-6.823	1.395	1.00 42.26	O
ATOM	1775	N	PRO	A	112	39.179	-8.521	2.525	1.00 41.64	N
ATOM	1776	CA	PRO	A	112	38.060	-8.786	1.640	1.00 42.53	C
ATOM	1778	CB	PRO	A	112	37.638	-10.175	2.115	1.00 44.60	C
ATOM	1781	CG	PRO	A	112	37.805	-10.066	3.588	1.00 43.64	C
ATOM	1784	CD	PRO	A	112	39.114	-9.318	3.760	1.00 43.26	C
ATOM	1787	C	PRO	A	112	36.945	-7.849	1.760	1.00 42.22	C
ATOM	1788	O	PRO	A	112	35.765	-8.273	2.247	1.00 43.92	O
ATOM	1789	N	MET	A	113	36.976	-6.650	1.225	1.00 41.57	N
ATOM	1791	CA	MET	A	113	35.973	-5.586	1.353	1.00 41.49	C
ATOM	1793	CB	MET	A	113	36.676	-4.230	1.468	1.00 40.58	C
ATOM	1796	CG	MET	A	113	37.824	-4.291	2.459	1.00 41.70	C
ATOM	1799	SD	MET	A	113	38.645	-2.730	2.961	1.00 44.40	S
ATOM	1800	CE	MET	A	113	38.085	-1.709	1.780	1.00 48.11	C
ATOM	1804	C	MET	A	113	35.088	-5.639	0.146	1.00 42.26	C
ATOM	1805	O	MET	A	113	35.080	-4.740	-0.708	1.00 42.73	O
ATOM	1806	N	ARG	A	114	34.344	-6.726	0.053	1.00 42.70	N
ATOM	1808	CA	ARG	A	114	33.513	-6.960	-1.108	1.00 43.40	C
ATOM	1810	CB	ARG	A	114	33.165	-8.423	-1.136	1.00 45.30	C
ATOM	1813	CG	ARG	A	114	32.163	-8.694	-0.123	1.00 48.87	C
ATOM	1816	CD	ARG	A	114	32.431	-9.967	0.498	1.00 54.37	C
ATOM	1819	NE	ARG	A	114	31.551	-10.186	1.603	1.00 56.34	N
ATOM	1821	CZ	ARG	A	114	31.514	-11.297	2.263	1.00 55.48	C
ATOM	1822	NH1	ARG	A	114	32.344	-12.304	1.982	1.00 51.37	N
ATOM	1825	NH2	ARG	A	114	30.674	-11.331	3.277	1.00 60.58	N
ATOM	1828	C	ARG	A	114	32.209	-6.193	-1.176	1.00 42.43	C
ATOM	1829	O	ARG	A	114	31.422	-6.405	-2.096	1.00 43.72	O
ATOM	1830	N	ASN	A	115	31.936	-5.385	-0.165	1.00 41.74	N
ATOM	1832	CA	ASN	A	115	30.800	-4.474	-0.183	1.00 42.25	C
ATOM	1834	CB	ASN	A	115	29.944	-4.676	1.039	1.00 43.29	C
ATOM	1837	CG	ASN	A	115	29.106	-5.845	0.914	1.00 44.56	C
ATOM	1838	OD1	ASN	A	115	28.419	-6.041	-0.040	1.00 47.36	O
ATOM	1839	ND2	ASN	A	115	29.181	-6.668	1.865	1.00 52.65	N
ATOM	1842	C	ASN	A	115	31.177	-3.013	-0.329	1.00 40.39	C
ATOM	1843	O	ASN	A	115	30.332	-2.226	-0.638	1.00 41.23	O
ATOM	1844	N	LEU	A	116	32.440	-2.683	-0.159	1.00 38.95	N
ATOM	1846	CA	LEU	A	116	32.917	-1.357	-0.384	1.00 39.18	C
ATOM	1848	CB	LEU	A	116	34.415	-1.245	-0.029	1.00 37.99	C
ATOM	1851	CG	LEU	A	116	34.961	0.166	-0.304	1.00 38.33	C
ATOM	1853	CD1	LEU	A	116	34.239	1.149	0.563	1.00 39.42	C
ATOM	1857	CD2	LEU	A	116	36.421	0.263	-0.035	1.00 38.20	C
ATOM	1861	C	LEU	A	116	32.611	-0.853	-1.839	1.00 40.77	C
ATOM	1862	O	LEU	A	116	33.220	-1.240	-2.811	1.00 41.13	O
ATOM	1863	N	GLN	A	117	31.641	0.020	-1.950	1.00 41.94	N
ATOM	1865	CA	GLN	A	117	31.185	0.433	-3.228	1.00 44.45	C
ATOM	1867	CB	GLN	A	117	29.790	-0.099	-3.459	1.00 46.41	C
ATOM	1870	CG	GLN	A	117	29.915	-1.437	-4.132	1.00 50.06	C
ATOM	1873	CD	GLN	A	117	28.659	-2.188	-4.162	1.00 54.73	C
ATOM	1874	OE1	GLN	A	117	27.898	-2.178	-3.185	1.00 56.09	O
ATOM	1875	NE2	GLN	A	117	28.436	-2.883	-5.252	1.00 56.36	N
ATOM	1878	C	GLN	A	117	31.319	1.908	-3.539	1.00 44.91	C
ATOM	1879	O	GLN	A	117	31.561	2.178	-4.686	1.00 47.48	O
ATOM	1880	N	GLU	A	118	31.246	2.824	-2.567	1.00 43.90	N
ATOM	1882	CA	GLU	A	118	31.630	4.203	-2.827	1.00 44.87	C
ATOM	1884	CB	GLU	A	118	30.338	5.058	-3.007	1.00 48.13	C
ATOM	1887	CG	GLU	A	118	30.326	6.583	-3.040	1.00 50.77	C
ATOM	1890	CD	GLU	A	118	30.632	7.244	-4.365	1.00 56.86	C
ATOM	1891	OE1	GLU	A	118	31.202	6.589	-5.234	1.00 65.98	O
ATOM	1892	OE2	GLU	A	118	30.462	8.468	-4.540	1.00 58.62	O
ATOM	1893	C	GLU	A	118	32.606	4.742	-1.785	1.00 42.40	C
ATOM	1894	O	GLU	A	118	32.534	4.414	-0.641	1.00 40.40	O
ATOM	1895	N	ILE	A	119	33.550	5.555	-2.272	1.00 42.58	N
ATOM	1897	CA	ILE	A	119	34.382	6.462	-1.481	1.00 41.49	C
ATOM	1899	CB	ILE	A	119	35.884	6.155	-1.688	1.00 40.87	C
ATOM	1901	CG1	ILE	A	119	36.283	4.839	-1.043	1.00 40.15	C
ATOM	1904	CD1	ILE	A	119	37.837	4.504	-1.293	1.00 40.31	C

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ATOM 1908  OG2 ILE A 119      36.808   7.251  -1.096  1.00 40.44           C
ATOM 1912  C   ILE A 119      34.012   7.873  -1.961  1.00 41.94           C
ATOM 1913  O   ILE A 119      34.441   8.325  -3.039  1.00 44.53           O
ATOM 1914  N   LEU A 120      33.182   8.572  -1.200  1.00 42.54           N
ATOM 1916  CA  LEU A 120      32.619   9.831  -1.705  1.00 46.08           C
ATOM 1918  CB  LEU A 120      31.798  10.529  -0.657  1.00 47.62           C
ATOM 1921  CG  LEU A 120      30.428  10.004  -0.329  1.00 50.88           C
ATOM 1923  CD1 LEU A 120      29.763  11.116   0.529  1.00 54.37           C
ATOM 1927  CD2 LEU A 120      29.652   9.701  -1.610  1.00 50.49           C
ATOM 1931  C   LEU A 120      33.658  10.830  -2.141  1.00 46.27           C
ATOM 1932  O   LEU A 120      33.462  11.522  -3.112  1.00 48.50           O
ATOM 1933  N   HIS A 121      34.737  10.906  -1.361  1.00 45.34           N
ATOM 1935  CA  HIS A 121      35.891  11.734  -1.632  1.00 45.38           C
ATOM 1937  CB  HIS A 121      35.889  12.961  -0.796  1.00 47.60           C
ATOM 1940  CG  HIS A 121      34.582  13.616  -0.646  1.00 47.72           C
ATOM 1941  ND1 HIS A 121      34.347  14.891  -1.097  1.00 49.72           N
ATOM 1943  CE1 HIS A 121      33.129  15.251  -0.758  1.00 50.90           C
ATOM 1945  NE2 HIS A 121      32.577  14.277  -0.081  1.00 49.78           N
ATOM 1947  CD2 HIS A 121      33.480  13.248   0.038  1.00 47.09           C
ATOM 1949  C   HIS A 121      37.208  11.131  -1.263  1.00 44.24           C
ATOM 1950  O   HIS A 121      37.331  10.470  -0.247  1.00 43.40           O
ATOM 1951  N   GLY A 122      38.215  11.496  -2.036  1.00 46.45           N
ATOM 1953  CA  GLY A 122      39.568  11.184  -1.687  1.00 46.38           C
ATOM 1956  C   GLY A 122      40.066  10.056  -2.530  1.00 46.66           C
ATOM 1957  O   GLY A 122      39.309   9.308  -3.132  1.00 44.50           O
ATOM 1958  N   ALA A 123      41.369   9.924  -2.491  1.00 47.30           N
ATOM 1960  CA  ALA A 123      42.029   8.889  -3.172  1.00 47.38           C
ATOM 1962  CB  ALA A 123      43.273   9.481  -3.863  1.00 49.98           C
ATOM 1966  C   ALA A 123      42.350   7.675  -2.244  1.00 44.62           C
ATOM 1967  O   ALA A 123      41.818   7.512  -1.158  1.00 43.85           O
ATOM 1968  N   VAL A 124      43.114   6.733  -2.791  1.00 45.41           N
ATOM 1970  CA  VAL A 124      43.423   5.507  -2.138  1.00 43.66           C
ATOM 1972  CB  VAL A 124      42.721   4.412  -2.827  1.00 42.78           C
ATOM 1974  CG1 VAL A 124      43.053   3.093  -2.159  1.00 44.72           C
ATOM 1978  CG2 VAL A 124      41.231   4.593  -2.655  1.00 42.04           C
ATOM 1982  C   VAL A 124      44.902   5.256  -2.142  1.00 44.48           C
ATOM 1983  O   VAL A 124      45.611   5.612  -3.083  1.00 46.68           O
ATOM 1984  N   ARG A 125      45.391   4.622  -1.099  1.00 43.14           N
ATOM 1986  CA  ARG A 125      46.761   4.216  -1.137  1.00 44.94           C
ATOM 1988  CB  ARG A 125      47.589   5.115  -0.277  1.00 47.27           C
ATOM 1991  CG  ARG A 125      49.029   4.742  -0.264  1.00 51.74           C
ATOM 1994  CD  ARG A 125      49.897   5.906   0.139  1.00 57.79           C
ATOM 1997  NE  ARG A 125      51.268   5.694  -0.336  1.00 64.37           N
ATOM 1999  CZ  ARG A 125      52.378   5.749   0.419  1.00 67.82           C
ATOM 2000  NH1 ARG A 125      52.312   6.066   1.746  1.00 67.17           N
ATOM 2003  NH2 ARG A 125      53.565   5.492  -0.178  1.00 68.87           N
ATOM 2006  C   ARG A 125      46.936   2.808  -0.655  1.00 43.08           C
ATOM 2007  O   ARG A 125      46.596   2.460   0.469  1.00 39.00           O
ATOM 2008  N   PHE A 126      47.508   2.011  -1.552  1.00 44.38           N
ATOM 2010  CA  PHE A 126      48.137   0.783  -1.167  1.00 44.03           C
ATOM 2012  CB  PHE A 126      47.510  -0.344  -1.926  1.00 43.71           C
ATOM 2015  CG  PHE A 126      46.218  -0.807  -1.391  1.00 40.01           C
ATOM 2016  CD1 PHE A 126      45.108  -0.080  -1.549  1.00 40.92           C
ATOM 2018  CE1 PHE A 126      43.887  -0.550  -1.063  1.00 39.27           C
ATOM 2020  CZ  PHE A 126      43.775  -1.763  -0.456  1.00 38.94           C
ATOM 2022  CE2 PHE A 126      44.833  -2.509  -0.371  1.00 42.57           C
ATOM 2024  CD2 PHE A 126      46.088  -2.034  -0.854  1.00 42.75           C
ATOM 2026  C   PHE A 126      49.648   0.852  -1.465  1.00 46.82           C
ATOM 2027  O   PHE A 126      50.036   1.090  -2.614  1.00 47.64           O
ATOM 2028  N   SER A 127      50.476   0.631  -0.423  1.00 47.70           N
ATOM 2030  CA  SER A 127      51.910   0.385  -0.566  1.00 51.19           C
ATOM 2032  CB  SER A 127      52.649   1.696  -0.466  1.00 54.02           C
ATOM 2035  OG  SER A 127      53.034   1.883   0.885  1.00 57.27           O
ATOM 2037  C   SER A 127      52.481  -0.594   0.485  1.00 51.56           C
ATOM 2038  O   SER A 127      52.047  -0.628   1.604  1.00 49.36           O
ATOM 2039  N   ASN A 128      53.468  -1.391   0.078  1.00 54.77           N
ATOM 2041  CA  ASN A 128      54.264  -2.229   0.968  1.00 56.21           C
ATOM 2043  CB  ASN A 128      55.137  -1.373   1.877  1.00 58.23           C
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ATOM	2046	CG	ASN	A	128	56.046	-0.407	1.097	1.00	62.17	C
ATOM	2047	OD1	ASN	A	128	57.182	-0.758	0.790	1.00	66.14	O
ATOM	2048	ND2	ASN	A	128	55.556	0.817	0.799	1.00	58.01	N
ATOM	2051	C	ASN	A	128	53.402	-3.228	1.755	1.00	54.35	C
ATOM	2052	O	ASN	A	128	53.461	-3.340	2.990	1.00	53.42	O
ATOM	2053	N	ASN	A	129	52.624	-3.990	0.999	1.00	53.03	N
ATOM	2055	CA	ASN	A	129	51.809	-5.034	1.562	1.00	51.72	C
ATOM	2057	CB	ASN	A	129	50.355	-4.712	1.281	1.00	48.91	C
ATOM	2060	CG	ASN	A	129	49.950	-3.386	1.877	1.00	48.71	C
ATOM	2061	OD1	ASN	A	129	49.956	-3.219	3.097	1.00	46.84	O
ATOM	2062	ND2	ASN	A	129	49.620	-2.425	1.021	1.00	49.70	N
ATOM	2065	C	ASN	A	129	52.142	-6.394	0.988	1.00	53.27	C
ATOM	2066	O	ASN	A	129	51.301	-6.990	0.376	1.00	52.88	O
ATOM	2067	N	PRO	A	130	53.322	-6.931	1.248	1.00	55.86	N
ATOM	2068	CA	PRO	A	130	53.849	-8.030	0.441	1.00	58.30	C
ATOM	2070	CB	PRO	A	130	55.334	-8.067	0.806	1.00	61.57	C
ATOM	2073	CG	PRO	A	130	55.422	-7.439	2.170	1.00	61.58	C
ATOM	2076	CD	PRO	A	130	54.194	-6.614	2.386	1.00	57.72	C
ATOM	2079	C	PRO	A	130	53.194	-9.378	0.718	1.00	58.29	C
ATOM	2080	O	PRO	A	130	53.617	-10.382	0.197	1.00	60.97	O
ATOM	2081	N	ALA	A	131	52.151	-9.438	1.513	1.00	55.73	N
ATOM	2083	CA	ALA	A	131	51.452	-10.692	1.621	1.00	54.80	C
ATOM	2085	CB	ALA	A	131	51.407	-11.073	3.006	1.00	54.50	C
ATOM	2089	C	ALA	A	131	50.056	-10.559	1.046	1.00	52.04	C
ATOM	2090	O	ALA	A	131	49.305	-11.499	1.010	1.00	52.22	O
ATOM	2091	N	LEU	A	132	49.731	-9.399	0.527	1.00	50.22	N
ATOM	2093	CA	LEU	A	132	48.347	-9.100	0.235	1.00	48.25	C
ATOM	2095	CB	LEU	A	132	48.111	-7.577	0.094	1.00	46.58	C
ATOM	2098	CG	LEU	A	132	46.693	-7.049	-0.140	1.00	42.72	C
ATOM	2100	CD1	LEU	A	132	45.792	-7.428	0.981	1.00	41.93	C
ATOM	2104	CD2	LEU	A	132	46.701	-5.522	-0.330	1.00	41.41	C
ATOM	2108	C	LEU	A	132	47.923	-9.826	-1.003	1.00	49.53	C
ATOM	2109	O	LEU	A	132	48.735	-10.093	-1.883	1.00	51.28	O
ATOM	2110	N	CYS	A	133	46.636	-10.148	-1.031	1.00	49.32	N
ATOM	2112	CA	CYS	A	133	46.017	-10.944	-2.085	1.00	51.07	C
ATOM	2114	CB	CYS	A	133	45.605	-12.286	-1.533	1.00	51.93	C
ATOM	2117	SG	CYS	A	133	47.113	-13.311	-1.525	1.00	58.93	S
ATOM	2118	C	CYS	A	133	44.814	-10.287	-2.732	1.00	49.03	C
ATOM	2119	O	CYS	A	133	44.089	-9.538	-2.070	1.00	47.78	O
ATOM	2120	N	ASN	A	134	44.660	-10.569	-4.026	1.00	48.89	N
ATOM	2122	CA	ASN	A	134	43.496	-10.312	-4.800	1.00	47.55	C
ATOM	2124	CB	ASN	A	134	42.304	-11.082	-4.237	1.00	46.96	C
ATOM	2127	CG	ASN	A	134	42.563	-12.593	-4.084	1.00	49.52	C
ATOM	2128	OD1	ASN	A	134	42.816	-13.265	-5.038	1.00	51.07	O
ATOM	2129	ND2	ASN	A	134	42.457	-13.112	-2.870	1.00	48.52	N
ATOM	2132	C	ASN	A	134	43.169	-8.832	-5.039	1.00	45.92	C
ATOM	2133	O	ASN	A	134	42.597	-8.494	-6.061	1.00	45.65	O
ATOM	2134	N	VAL	A	135	43.530	-7.933	-4.135	1.00	45.56	N
ATOM	2136	CA	VAL	A	135	42.985	-6.552	-4.156	1.00	43.82	C
ATOM	2138	CB	VAL	A	135	43.400	-5.780	-2.932	1.00	42.47	C
ATOM	2140	CG1	VAL	A	135	43.037	-4.266	-3.017	1.00	41.77	C
ATOM	2144	CG2	VAL	A	135	42.786	-6.384	-1.737	1.00	41.35	C
ATOM	2148	C	VAL	A	135	43.493	-5.980	-5.431	1.00	45.40	C
ATOM	2149	O	VAL	A	135	42.723	-5.205	-6.070	1.00	45.40	O
ATOM	2150	N	GLU	A	136	44.755	-6.158	-5.796	1.00	46.87	N
ATOM	2152	CA	GLU	A	136	45.404	-5.750	-7.035	1.00	49.44	C
ATOM	2154	CB	GLU	A	136	46.677	-6.586	-7.316	1.00	52.90	C
ATOM	2157	CG	GLU	A	136	47.654	-6.085	-8.413	1.00	57.64	C
ATOM	2160	CD	GLU	A	136	48.784	-7.097	-8.714	1.00	66.03	C
ATOM	2161	OE1	GLU	A	136	49.015	-7.981	-7.798	1.00	68.30	O
ATOM	2162	OE2	GLU	A	136	49.415	-7.041	-9.837	1.00	70.61	O
ATOM	2163	C	GLU	A	136	44.526	-5.895	-9.238	1.00	50.26	C
ATOM	2164	O	GLU	A	136	44.781	-5.226	-9.234	1.00	52.27	O
ATOM	2165	N	SER	A	137	43.516	-6.745	-8.189	1.00	49.34	N
ATOM	2167	CA	SER	A	137	42.673	-6.934	-9.365	1.00	51.02	C
ATOM	2169	CB	SER	A	137	42.120	-8.342	-9.390	1.00	51.77	C
ATOM	2172	OG	SER	A	137	41.372	-8.537	-8.213	1.00	49.79	O
ATOM	2174	C	SER	A	137	41.521	-5.953	-9.408	1.00	49.35	C

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ATOM 2175  O   SER A 137      40.737  -5.909 -10.335  1.00 50.09           O
ATOM 2176  N   ILE A 138      41.427  -5.128  -8.420  1.00 47.68           N
ATOM 2178  CA  ILE A 138      40.207  -4.429  -8.272  1.00 47.46           C
ATOM 2180  CB  ILE A 138      39.947  -4.236  -6.830  1.00 45.92           C
ATOM 2182  CG1 ILE A 138      39.161  -5.479  -6.402  1.00 50.04           C
ATOM 2185  CD1 ILE A 138      38.907  -5.482  -4.979  1.00 52.31           C
ATOM 2189  CG2 ILE A 138      39.130  -3.036  -6.535  1.00 44.29           C
ATOM 2193  C   ILE A 138      40.270  -3.168  -9.014  1.00 48.13           C
ATOM 2194  O   ILE A 138      41.305  -2.535  -9.060  1.00 49.23           O
ATOM 2195  N   GLN A 139      39.110  -2.834  -9.567  1.00 48.49           N
ATOM 2197  CA  GLN A 139      38.826  -1.708 -10.439  1.00 48.81           C
ATOM 2199  CB  GLN A 139      37.724  -2.104 -11.446  1.00 50.08           C
ATOM 2202  CG  GLN A 139      38.234  -3.051 -12.588  1.00 52.30           C
ATOM 2205  CD  GLN A 139      37.175  -3.535 -13.588  1.00 54.29           C
ATOM 2206  OE1 GLN A 139      36.906  -2.864 -14.560  1.00 59.63           O
ATOM 2207  NE2 GLN A 139      36.617  -4.708 -13.361  1.00 52.60           N
ATOM 2210  C   GLN A 139      38.326  -0.553  -9.603  1.00 48.02           C
ATOM 2211  O   GLN A 139      37.130  -0.409  -9.361  1.00 48.86           O
ATOM 2212  N   TRP A 140      39.238   0.279  -9.138  1.00 47.32           N
ATOM 2214  CA  TRP A 140      38.876   1.416  -8.309  1.00 45.95           C
ATOM 2216  CB  TRP A 140      40.180   2.000  -7.785  1.00 46.14           C
ATOM 2219  CG  TRP A 140      40.885   0.963  -6.994  1.00 46.00           C
ATOM 2220  CD1 TRP A 140      41.802   0.118  -7.451  1.00 49.63           C
ATOM 2222  NE1 TRP A 140      42.183  -0.754  -6.450  1.00 52.24           N
ATOM 2224  CE2 TRP A 140      41.481  -0.469  -5.318  1.00 45.13           C
ATOM 2225  CD2 TRP A 140      40.644   0.601  -5.619  1.00 46.06           C
ATOM 2226  CE3 TRP A 140      39.843   1.122  -4.603  1.00 47.07           C
ATOM 2228  CZ3 TRP A 140      39.902   0.531  -3.331  1.00 46.32           C
ATOM 2230  CH2 TRP A 140      40.751  -0.540  -3.099  1.00 44.90           C
ATOM 2232  CZ2 TRP A 140      41.559  -1.032  -4.085  1.00 44.06           C
ATOM 2234  C   TRP A 140      37.958   2.468  -8.988  1.00 46.64           C
ATOM 2235  O   TRP A 140      37.156   3.152  -8.417  1.00 47.16           O
ATOM 2236  N   ARG A 141      38.039   2.549 -10.251  1.00 49.56           N
ATOM 2238  CA  ARG A 141      37.281   3.487 -11.006  1.00 51.70           C
ATOM 2240  CB  ARG A 141      37.690   3.287 -12.479  1.00 54.96           C
ATOM 2243  CG  ARG A 141      37.314   4.259 -13.453  1.00 59.89           C
ATOM 2246  CD  ARG A 141      37.332   3.683 -14.883  1.00 68.80           C
ATOM 2249  NE  ARG A 141      36.925   4.702 -15.900  1.00 76.88           N
ATOM 2251  CZ  ARG A 141      36.168   4.420 -16.981  1.00 79.58           C
ATOM 2252  NH1 ARG A 141      35.680   3.165 -17.156  1.00 77.54           N
ATOM 2255  NH2 ARG A 141      35.910   5.388 -17.889  1.00 83.87           N
ATOM 2258  C   ARG A 141      35.805   3.315 -10.714  1.00 51.04           C
ATOM 2259  O   ARG A 141      35.077   4.284 -10.763  1.00 52.62           O
ATOM 2260  N   ASP A 142      35.337   2.129 -10.354  1.00 50.38           N
ATOM 2262  CA  ASP A 142      33.936   2.014  -9.928  1.00 50.96           C
ATOM 2264  CB  ASP A 142      33.502   0.590  -9.927  1.00 51.24           C
ATOM 2267  CG  ASP A 142      32.027   0.437  -9.613  1.00 56.27           C
ATOM 2268  OD1 ASP A 142      31.590   0.872  -8.537  1.00 64.27           O
ATOM 2269  OD2 ASP A 142      31.195  -0.113 -10.333  1.00 62.04           O
ATOM 2270  C   ASP A 142      33.730   2.575  -8.491  1.00 48.89           C
ATOM 2271  O   ASP A 142      32.639   3.015  -8.113  1.00 47.96           O
ATOM 2272  N   ILE A 143      34.781   2.510  -7.685  1.00 47.20           N
ATOM 2274  CA  ILE A 143      34.745   2.956  -6.294  1.00 44.55           C
ATOM 2276  CB  ILE A 143      35.712   2.142  -5.533  1.00 42.17           C
ATOM 2278  CG1 ILE A 143      35.086   0.768  -5.327  1.00 40.78           C
ATOM 2281  CD1 ILE A 143      36.133  -0.301  -5.046  1.00 40.44           C
ATOM 2285  CG2 ILE A 143      36.018   2.787  -4.247  1.00 41.34           C
ATOM 2289  C   ILE A 143      35.044   4.401  -6.069  1.00 44.56           C
ATOM 2290  O   ILE A 143      34.327   5.095  -5.380  1.00 44.62           O
ATOM 2291  N   VAL A 144      36.124   4.863  -6.630  1.00 45.00           N
ATOM 2293  CA  VAL A 144      36.509   6.218  -6.403  1.00 45.50           C
ATOM 2295  CB  VAL A 144      38.028   6.287  -6.507  1.00 45.97           C
ATOM 2297  CG1 VAL A 144      38.574   7.708  -6.491  1.00 48.38           C
ATOM 2301  CG2 VAL A 144      38.596   5.619  -5.328  1.00 43.75           C
ATOM 2305  C   VAL A 144      35.797   7.249  -7.293  1.00 48.79           C
ATOM 2306  O   VAL A 144      35.338   7.047  -8.422  1.00 49.84           O
ATOM 2307  N   SER A 145      35.723   8.445  -6.763  1.00 51.81           N
ATOM 2309  CA  SER A 145      35.288   9.568  -7.616  1.00 54.78           C
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ATOM	2311	CB	SER	A	145	34.926	10.760	-6.750	1.00	54.47	C
ATOM	2314	OG	SER	A	145	34.427	11.741	-7.626	1.00	59.24	O
ATOM	2316	C	SER	A	145	36.287	9.966	-8.735	1.00	56.23	C
ATOM	2317	O	SER	A	145	37.469	10.176	-8.515	1.00	55.05	O
ATOM	2318	N	SER	A	146	35.814	10.152	-9.935	1.00	58.67	N
ATOM	2320	CA	SER	A	146	36.764	10.567	-10.927	1.00	61.98	C
ATOM	2322	CB	SER	A	146	36.061	10.701	-12.244	1.00	65.22	C
ATOM	2325	OG	SER	A	146	35.229	11.815	-12.148	1.00	69.73	O
ATOM	2327	C	SER	A	146	37.586	11.851	-10.591	1.00	63.73	C
ATOM	2328	O	SER	A	146	38.718	12.001	-11.061	1.00	66.06	O
ATOM	2329	N	ASP	A	147	37.110	12.782	-9.776	1.00	63.35	N
ATOM	2331	CA	ASP	A	147	38.047	13.855	-9.448	1.00	64.51	C
ATOM	2333	CB	ASP	A	147	37.388	14.938	-8.643	1.00	65.88	C
ATOM	2336	CG	ASP	A	147	36.191	15.484	-9.315	1.00	70.56	C
ATOM	2337	OD1	ASP	A	147	36.324	15.944	-10.449	1.00	76.86	O
ATOM	2338	OD2	ASP	A	147	35.062	15.475	-8.799	1.00	74.60	O
ATOM	2339	C	ASP	A	147	39.320	13.451	-8.694	1.00	61.87	C
ATOM	2340	O	ASP	A	147	40.181	14.271	-8.574	1.00	64.00	O
ATOM	2341	N	PHE	A	148	39.443	12.235	-8.160	1.00	58.00	N
ATOM	2343	CA	PHE	A	148	40.589	11.831	-7.323	1.00	55.65	C
ATOM	2345	CB	PHE	A	148	40.100	11.392	-5.912	1.00	52.67	C
ATOM	2348	CG	PHE	A	148	39.418	12.463	-5.124	1.00	52.51	C
ATOM	2349	CD1	PHE	A	148	38.059	12.760	-5.313	1.00	55.87	C
ATOM	2351	CE1	PHE	A	148	37.408	13.812	-4.627	1.00	53.04	C
ATOM	2353	CZ	PHE	A	148	38.100	14.471	-3.764	1.00	53.77	C
ATOM	2355	CE2	PHE	A	148	39.466	14.202	-3.553	1.00	50.27	C
ATOM	2357	CD2	PHE	A	148	40.105	13.203	-4.221	1.00	53.15	C
ATOM	2359	C	PHE	A	148	41.411	10.674	-7.958	1.00	55.84	C
ATOM	2360	O	PHE	A	148	42.396	10.172	-7.375	1.00	54.76	O
ATOM	2361	N	LEU	A	149	40.992	10.208	-9.141	1.00	57.46	N
ATOM	2363	CA	LEU	A	149	41.756	9.207	-9.902	1.00	57.20	C
ATOM	2365	CB	LEU	A	149	41.124	8.951	-11.285	1.00	58.59	C
ATOM	2368	CG	LEU	A	149	39.781	8.163	-11.362	1.00	57.42	C
ATOM	2370	CD1	LEU	A	149	39.542	7.556	-12.713	1.00	59.65	C
ATOM	2374	CD2	LEU	A	149	39.590	7.015	-10.313	1.00	54.35	C
ATOM	2378	C	LEU	A	149	43.154	9.743	-10.028	1.00	59.44	C
ATOM	2379	O	LEU	A	149	44.122	9.110	-9.706	1.00	57.88	O
ATOM	2380	N	SER	A	150	43.237	10.997	-10.427	1.00	63.31	N
ATOM	2382	CA	SER	A	150	44.517	11.658	-10.439	1.00	65.95	C
ATOM	2384	CB	SER	A	150	44.345	13.107	-10.848	1.00	69.04	C
ATOM	2387	OG	SER	A	150	44.468	13.155	-12.260	1.00	74.02	O
ATOM	2389	C	SER	A	150	45.359	11.553	-9.165	1.00	64.15	C
ATOM	2390	O	SER	A	150	46.550	11.630	-9.276	1.00	66.94	O
ATOM	2391	N	ASN	A	151	44.802	11.413	-7.962	1.00	60.55	N
ATOM	2393	CA	ASN	A	151	45.676	11.373	-6.785	1.00	59.05	C
ATOM	2395	CB	ASN	A	151	45.280	12.526	-5.824	1.00	58.72	C
ATOM	2398	CG	ASN	A	151	45.979	13.869	-6.202	1.00	65.21	C
ATOM	2399	OD1	ASN	A	151	45.616	14.591	-7.128	1.00	66.28	O
ATOM	2400	ND2	ASN	A	151	47.026	14.157	-5.506	1.00	72.90	N
ATOM	2403	C	ASN	A	151	45.879	9.943	-6.181	1.00	55.44	C
ATOM	2404	O	ASN	A	151	46.471	9.774	-5.128	1.00	53.43	O
ATOM	2405	N	MET	A	152	45.499	8.901	-6.932	1.00	54.65	N
ATOM	2407	CA	MET	A	152	45.653	7.496	-6.467	1.00	52.66	C
ATOM	2409	CB	MET	A	152	44.910	6.533	-7.366	1.00	51.86	C
ATOM	2412	CG	MET	A	152	43.443	6.813	-7.552	1.00	52.03	C
ATOM	2415	SD	MET	A	152	42.338	6.049	-6.388	1.00	50.06	S
ATOM	2416	CE	MET	A	152	42.743	4.273	-6.557	1.00	48.82	C
ATOM	2420	C	MET	A	152	47.124	7.024	-6.371	1.00	54.06	C
ATOM	2421	O	MET	A	152	47.951	7.492	-7.134	1.00	56.68	O
ATOM	2422	N	SER	A	153	47.449	6.144	-5.399	1.00	52.56	N
ATOM	2424	CA	SER	A	153	48.828	5.589	-5.246	1.00	54.12	C
ATOM	2426	CB	SER	A	153	49.601	6.341	-4.187	1.00	54.43	C
ATOM	2429	OG	SER	A	153	50.968	6.247	-4.512	1.00	56.90	O
ATOM	2431	C	SER	A	153	48.953	4.069	-4.949	1.00	52.77	C
ATOM	2432	O	SER	A	153	49.268	3.659	-3.817	1.00	52.35	O
ATOM	2433	N	MET	A	154	48.749	3.276	-5.995	1.00	52.33	N
ATOM	2435	CA	MET	A	154	48.550	1.862	-5.893	1.00	50.75	C
ATOM	2437	CB	MET	A	154	47.455	1.440	-6.811	1.00	49.97	C

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ATOM 2440  CG  MET A 154      46.216   2.318  -6.656  1.00 50.89           C
ATOM 2443  SD  MET A 154      45.282   1.929  -5.148  1.00 58.01           S
ATOM 2444  CE  MET A 154      45.749   3.387  -4.448  1.00 57.15           C
ATOM 2448  C   MET A 154      49.802   1.157  -6.255  1.00 52.92           C
ATOM 2449  O   MET A 154      50.276   1.278  -7.330  1.00 54.18           O
ATOM 2450  N   ASP A 155      50.346   0.414  -5.315  1.00 53.59           N
ATOM 2452  CA  ASP A 155      51.559  -0.296  -5.564  1.00 57.73           C
ATOM 2454  CB  ASP A 155      52.786   0.526  -5.195  1.00 60.70           C
ATOM 2457  CG  ASP A 155      54.088  -0.300  -5.273  1.00 67.99           C
ATOM 2458  OD1 ASP A 155      54.469  -0.830  -6.389  1.00 70.11           O
ATOM 2459  OD2 ASP A 155      54.773  -0.487  -4.215  1.00 74.44           O
ATOM 2460  C   ASP A 155      51.489  -1.670  -4.882  1.00 56.85           C
ATOM 2461  O   ASP A 155      51.675  -1.845  -3.662  1.00 55.16           O
ATOM 2462  N   PHE A 156      51.232  -2.651  -5.733  1.00 57.62           N
ATOM 2464  CA  PHE A 156      50.904  -3.965  -5.298  1.00 57.25           C
ATOM 2466  CB  PHE A 156      49.701  -4.410  -6.080  1.00 55.63           C
ATOM 2469  CG  PHE A 156      48.424  -3.817  -5.645  1.00 51.82           C
ATOM 2470  CD1 PHE A 156      47.824  -2.852  -6.408  1.00 48.57           C
ATOM 2472  CE1 PHE A 156      46.643  -2.329  -6.067  1.00 48.09           C
ATOM 2474  CZ  PHE A 156      46.005  -2.746  -4.921  1.00 49.29           C
ATOM 2476  CE2 PHE A 156      46.573  -3.759  -4.128  1.00 49.85           C
ATOM 2478  CD2 PHE A 156      47.775  -4.298  -4.513  1.00 51.25           C
ATOM 2480  C   PHE A 156      52.031  -4.922  -5.663  1.00 62.02           C
ATOM 2481  O   PHE A 156      52.258  -5.121  -6.862  1.00 65.96           O
ATOM 2482  N   GLN A 157      52.711  -5.558  -4.693  1.00 63.64           N
ATOM 2484  CA  GLN A 157      53.730  -6.585  -5.019  1.00 67.83           C
ATOM 2486  CB  GLN A 157      55.158  -6.019  -5.121  1.00 71.20           C
ATOM 2489  CG  GLN A 157      55.232  -4.741  -5.955  1.00 74.76           C
ATOM 2492  CD  GLN A 157      56.512  -3.922  -5.738  1.00 81.43           C
ATOM 2493  OE1 GLN A 157      57.596  -4.501  -5.524  1.00 84.93           O
ATOM 2494  NE2 GLN A 157      56.394  -2.570  -5.832  1.00 80.80           N
ATOM 2497  C   GLN A 157      53.694  -7.701  -3.995  1.00 67.85           C
ATOM 2498  O   GLN A 157      54.239  -7.549  -2.884  1.00 68.89           O
ATOM 2499  N   ASN A 158      53.049  -8.824  -4.343  1.00 67.34           N
ATOM 2501  CA  ASN A 158      52.985  -9.931  -3.387  1.00 66.37           C
ATOM 2503  CB  ASN A 158      51.748 -10.825  -3.573  1.00 65.25           C
ATOM 2506  CG  ASN A 158      51.555 -11.805  -2.408  1.00 65.80           C
ATOM 2507  OD1 ASN A 158      52.434 -12.615  -2.126  1.00 69.30           O
ATOM 2508  ND2 ASN A 158      50.396 -11.749  -1.760  1.00 62.84           N
ATOM 2511  C   ASN A 158      54.252 -10.683  -3.607  1.00 68.88           C
ATOM 2512  O   ASN A 158      54.482 -11.075  -4.714  1.00 71.15           O
ATOM 2513  N   HIS A 159      55.079 -10.768  -2.562  1.00 68.92           N
ATOM 2515  CA  HIS A 159      56.367 -11.474  -2.511  1.00 72.75           C
ATOM 2517  CB  HIS A 159      57.529 -10.454  -2.416  1.00 74.34           C
ATOM 2525  C   HIS A 159      56.430 -12.503  -1.321  1.00 73.55           C
ATOM 2526  O   HIS A 159      57.483 -13.106  -1.060  1.00 77.25           O
ATOM 2527  N   LEU A 160      55.312 -12.726  -0.620  1.00 70.71           N
ATOM 2529  CA  LEU A 160      55.300 -13.613   0.558  1.00 71.96           C
ATOM 2531  CB  LEU A 160      54.955 -12.858   1.835  1.00 69.16           C
ATOM 2534  CG  LEU A 160      56.170 -12.018   2.242  1.00 72.49           C
ATOM 2536  CD1 LEU A 160      55.879 -11.038   3.417  1.00 70.29           C
ATOM 2540  CD2 LEU A 160      57.406 -12.963   2.560  1.00 78.18           C
ATOM 2544  C   LEU A 160      54.436 -14.860   0.466  1.00 72.80           C
ATOM 2545  O   LEU A 160      54.715 -15.905   1.146  1.00 76.27           O
ATOM 2546  N   GLY A 161      53.426 -14.830  -0.387  1.00 70.92           N
ATOM 2548  CA  GLY A 161      52.682 -16.052  -0.588  1.00 71.53           C
ATOM 2551  C   GLY A 161      52.337 -16.324  -2.010  1.00 72.10           C
ATOM 2552  O   GLY A 161      52.925 -15.725  -2.936  1.00 73.91           O
ATOM 2553  N   SER A 162      51.354 -17.218  -2.151  1.00 71.50           N
ATOM 2555  CA  SER A 162      50.850 -17.612  -3.430  1.00 71.80           C
ATOM 2557  CB  SER A 162      51.072 -19.072  -3.631  1.00 75.27           C
ATOM 2560  OG  SER A 162      49.976 -19.671  -3.029  1.00 75.08           O
ATOM 2562  C   SER A 162      49.382 -17.287  -3.697  1.00 68.40           C
ATOM 2563  O   SER A 162      49.076 -17.118  -4.826  1.00 71.58           O
ATOM 2564  N   CYS A 163      48.443 -17.195  -2.785  1.00 64.77           N
ATOM 2566  CA  CYS A 163      47.190 -16.558  -3.248  1.00 62.32           C
ATOM 2568  CB  CYS A 163      47.482 -15.350  -4.121  1.00 60.54           C
ATOM 2571  SG  CYS A 163      48.195 -14.039  -3.164  1.00 65.07           S
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ATOM	2572	C	CYS	A	163	46.203	-17.327	-4.092	1.00	62.09	C
ATOM	2573	O	CYS	A	163	46.486	-17.842	-5.125	1.00	64.63	O
ATOM	2574	N	GLN	A	164	44.966	-17.252	-3.712	1.00	59.87	N
ATOM	2576	CA	GLN	A	164	43.963	-17.875	-4.490	1.00	59.87	C
ATOM	2578	CB	GLN	A	164	42.775	-18.151	-3.577	1.00	58.78	C
ATOM	2581	CG	GLN	A	164	43.135	-19.114	-2.394	1.00	60.45	C
ATOM	2584	CD	GLN	A	164	42.289	-18.848	-1.173	1.00	58.32	C
ATOM	2585	OE1	GLN	A	164	41.246	-19.446	-1.065	1.00	62.19	O
ATOM	2586	NE2	GLN	A	164	42.706	-17.902	-0.272	1.00	60.77	N
ATOM	2589	C	GLN	A	164	43.615	-17.003	-5.717	1.00	58.68	C
ATOM	2590	O	GLN	A	164	44.054	-15.875	-5.910	1.00	55.31	O
ATOM	2591	N	LYS	A	165	42.840	-17.597	-6.587	1.00	60.41	N
ATOM	2593	CA	LYS	A	165	42.374	-16.938	-7.780	1.00	59.80	C
ATOM	2595	CB	LYS	A	165	42.587	-17.888	-8.966	1.00	63.00	C
ATOM	2598	CG	LYS	A	165	44.023	-18.081	-9.347	1.00	64.02	C
ATOM	2601	CD	LYS	A	165	44.046	-18.676	-10.685	1.00	70.24	C
ATOM	2604	CE	LYS	A	165	45.354	-19.359	-10.979	1.00	75.93	C
ATOM	2607	NZ	LYS	A	165	45.322	-20.005	-12.321	1.00	78.93	N
ATOM	2611	C	LYS	A	165	40.898	-16.505	-7.632	1.00	57.91	C
ATOM	2612	O	LYS	A	165	40.082	-17.115	-6.894	1.00	57.15	O
ATOM	2613	N	CYS	A	166	40.574	-15.429	-8.331	1.00	56.63	N
ATOM	2615	CA	CYS	A	166	39.229	-14.949	-8.421	1.00	56.14	C
ATOM	2617	CB	CYS	A	166	39.265	-13.725	-9.280	1.00	56.07	C
ATOM	2620	SG	CYS	A	166	39.966	-12.314	-8.384	1.00	60.17	S
ATOM	2621	C	CYS	A	166	38.278	-15.928	-9.059	1.00	58.20	C
ATOM	2622	O	CYS	A	166	38.612	-16.593	-9.993	1.00	60.87	O
ATOM	2623	N	ASP	A	167	37.054	-15.995	-8.604	1.00	58.01	N
ATOM	2625	CA	ASP	A	167	36.071	-16.803	-9.313	1.00	62.21	C
ATOM	2627	CB	ASP	A	167	34.734	-16.757	-8.577	1.00	61.75	C
ATOM	2630	CG	ASP	A	167	33.981	-18.042	-8.691	1.00	67.21	C
ATOM	2631	OD1	ASP	A	167	33.252	-18.146	-9.682	1.00	71.66	O
ATOM	2632	OD2	ASP	A	167	34.098	-19.030	-7.887	1.00	71.36	O
ATOM	2633	C	ASP	A	167	35.907	-16.370	-10.772	1.00	64.34	C
ATOM	2634	O	ASP	A	167	35.932	-15.189	-11.077	1.00	64.04	O
ATOM	2635	N	PRO	A	168	35.733	-17.276	-11.712	1.00	69.18	N
ATOM	2636	CA	PRO	A	168	35.529	-16.843	-13.117	1.00	71.67	C
ATOM	2638	CB	PRO	A	168	35.482	-18.135	-13.880	1.00	75.31	C
ATOM	2641	CG	PRO	A	168	34.937	-19.094	-12.867	1.00	75.75	C
ATOM	2644	CD	PRO	A	168	35.648	-18.736	-11.577	1.00	72.39	C
ATOM	2647	C	PRO	A	168	34.190	-16.113	-13.277	1.00	72.13	C
ATOM	2648	O	PRO	A	168	33.980	-15.434	-14.273	1.00	74.17	O
ATOM	2649	N	SER	A	169	33.333	-16.243	-12.263	1.00	70.78	N
ATOM	2651	CA	SER	A	169	32.029	-15.649	-12.196	1.00	70.36	C
ATOM	2653	CB	SER	A	169	31.448	-16.185	-10.906	1.00	69.09	C
ATOM	2656	OG	SER	A	169	30.162	-15.740	-10.627	1.00	69.59	O
ATOM	2658	C	SER	A	169	32.176	-14.099	-12.189	1.00	68.96	C
ATOM	2659	O	SER	A	169	31.369	-13.354	-12.767	1.00	69.80	O
ATOM	2660	N	CYS	A	170	33.235	-13.645	-11.522	1.00	66.34	N
ATOM	2662	CA	CYS	A	170	33.585	-12.257	-11.389	1.00	64.17	C
ATOM	2664	CB	CYS	A	170	35.009	-12.194	-10.803	1.00	62.64	C
ATOM	2667	SG	CYS	A	170	35.099	-12.706	-9.064	1.00	65.28	S
ATOM	2668	C	CYS	A	170	33.626	-11.532	-12.691	1.00	64.97	C
ATOM	2669	O	CYS	A	170	34.036	-12.154	-13.644	1.00	67.60	O
ATOM	2670	N	PRO	A	171	33.293	-10.224	-12.709	1.00	63.33	N
ATOM	2671	CA	PRO	A	171	33.587	-9.309	-13.840	1.00	63.95	C
ATOM	2673	CB	PRO	A	171	32.709	-8.083	-13.545	1.00	62.43	C
ATOM	2676	CG	PRO	A	171	32.618	-8.081	-12.137	1.00	60.40	C
ATOM	2679	CD	PRO	A	171	32.609	-9.504	-11.624	1.00	60.72	C
ATOM	2682	C	PRO	A	171	35.056	-8.844	-13.952	1.00	62.28	C
ATOM	2683	O	PRO	A	171	35.613	-8.339	-12.977	1.00	58.36	O
ATOM	2684	N	ASN	A	172	35.651	-9.053	-15.137	1.00	64.60	N
ATOM	2686	CA	ASN	A	172	37.014	-8.626	-15.469	1.00	64.03	C
ATOM	2688	CB	ASN	A	172	37.092	-7.107	-15.494	1.00	63.31	C
ATOM	2691	CG	ASN	A	172	36.067	-6.493	-16.417	1.00	64.86	C
ATOM	2692	OD1	ASN	A	172	36.063	-6.769	-17.588	1.00	68.52	O
ATOM	2693	ND2	ASN	A	172	35.183	-5.689	-15.884	1.00	63.98	N
ATOM	2696	C	ASN	A	172	38.072	-9.188	-14.525	1.00	62.11	C
ATOM	2697	O	ASN	A	172	39.141	-8.611	-14.391	1.00	60.44	O

ATOM	2698	N	GLY	A	173	37.760	-10.330	-13.891	1.00 61.90	N
ATOM	2700	CA	GLY	A	173	38.676	-11.067	-13.029	1.00 60.44	C
ATOM	2703	C	GLY	A	173	38.962	-10.365	-11.733	1.00 56.68	C
ATOM	2704	O	GLY	A	173	39.958	-10.665	-11.056	1.00 54.88	O
ATOM	2705	N	SER	A	174	38.081	-9.436	-11.392	1.00 54.92	N
ATOM	2707	CA	SER	A	174	38.350	-8.556	-10.289	1.00 53.27	C
ATOM	2709	CB	SER	A	174	38.094	-7.084	-10.657	1.00 54.14	C
ATOM	2712	OG	SER	A	174	37.408	-6.922	-11.890	1.00 61.12	O
ATOM	2714	C	SER	A	174	37.560	-8.949	-9.069	1.00 51.33	C
ATOM	2715	O	SER	A	174	36.354	-9.118	-9.128	1.00 51.96	O
ATOM	2716	N	CYS	A	175	38.277	-9.140	-7.965	1.00 50.14	N
ATOM	2718	CA	CYS	A	175	37.716	-9.660	-6.724	1.00 49.06	C
ATOM	2720	CB	CYS	A	175	37.668	-11.161	-6.785	1.00 51.08	C
ATOM	2723	SG	CYS	A	175	39.237	-11.989	-6.497	1.00 54.98	S
ATOM	2724	C	CYS	A	175	38.552	-9.228	-5.541	1.00 46.28	C
ATOM	2725	O	CYS	A	175	39.663	-8.727	-5.713	1.00 45.60	O
ATOM	2726	N	TRP	A	176	38.009	-9.415	-4.342	1.00 44.79	N
ATOM	2728	CA	TRP	A	176	38.693	-9.052	-3.078	1.00 42.74	C
ATOM	2730	CB	TRP	A	176	37.714	-8.389	-2.131	1.00 40.96	C
ATOM	2733	CG	TRP	A	176	37.119	-7.038	-2.642	1.00 40.42	C
ATOM	2734	CD1	TRP	A	176	35.982	-6.870	-3.326	1.00 39.92	C
ATOM	2736	NE1	TRP	A	176	35.755	-5.544	-3.560	1.00 41.12	N
ATOM	2738	CE2	TRP	A	176	36.782	-4.827	-3.009	1.00 41.59	C
ATOM	2739	CD2	TRP	A	176	37.639	-5.735	-2.393	1.00 38.66	C
ATOM	2740	CE3	TRP	A	176	38.790	-5.256	-1.764	1.00 39.18	C
ATOM	2742	CZ3	TRP	A	176	39.040	-3.931	-1.766	1.00 36.89	C
ATOM	2744	CH2	TRP	A	176	38.161	-3.054	-2.364	1.00 40.57	C
ATOM	2746	CZ2	TRP	A	176	37.023	-3.483	-3.010	1.00 40.72	C
ATOM	2748	C	TRP	A	176	39.264	-10.290	-2.369	1.00 43.56	C
ATOM	2749	O	TRP	A	176	39.952	-10.188	-1.370	1.00 42.95	O
ATOM	2750	N	GLY	A	177	38.981	-11.465	-2.907	1.00 45.37	N
ATOM	2752	CA	GLY	A	177	39.457	-12.658	-2.312	1.00 45.99	C
ATOM	2755	C	GLY	A	177	38.797	-13.810	-2.985	1.00 49.26	C
ATOM	2756	O	GLY	A	177	38.184	-13.706	-4.041	1.00 50.81	O
ATOM	2757	N	ALA	A	178	38.914	-14.939	-2.328	1.00 50.26	N
ATOM	2759	CA	ALA	A	178	38.527	-16.179	-2.908	1.00 53.28	C
ATOM	2761	CB	ALA	A	178	39.129	-17.222	-2.129	1.00 55.32	C
ATOM	2765	C	ALA	A	178	37.029	-16.275	-2.878	1.00 53.36	C
ATOM	2766	O	ALA	A	178	36.440	-15.593	-2.110	1.00 50.54	O
ATOM	2767	N	GLY	A	179	36.414	-17.067	-3.747	1.00 55.92	N
ATOM	2769	CA	GLY	A	179	34.974	-17.248	-3.736	1.00 57.34	C
ATOM	2772	C	GLY	A	179	34.100	-16.268	-4.495	1.00 56.65	C
ATOM	2773	O	GLY	A	179	34.480	-15.136	-4.759	1.00 53.03	O
ATOM	2774	N	GLU	A	180	32.925	-16.772	-4.873	1.00 59.51	N
ATOM	2776	CA	GLU	A	180	31.983	-16.075	-5.712	1.00 60.69	C
ATOM	2778	CB	GLU	A	180	30.822	-16.977	-6.100	1.00 64.23	C
ATOM	2781	CG	GLU	A	180	30.038	-16.423	-7.273	1.00 69.05	C
ATOM	2784	CD	GLU	A	180	28.984	-17.373	-7.882	1.00 79.34	C
ATOM	2785	OE1	GLU	A	180	27.807	-16.913	-7.924	1.00 83.24	O
ATOM	2786	OE2	GLU	A	180	29.287	-18.553	-8.346	1.00 85.62	O
ATOM	2787	C	GLU	A	180	31.425	-14.874	-4.965	1.00 58.20	C
ATOM	2788	O	GLU	A	180	31.056	-13.872	-5.585	1.00 55.67	O
ATOM	2789	N	GLU	A	181	31.338	-15.008	-3.639	1.00 57.72	N
ATOM	2791	CA	GLU	A	181	30.851	-13.919	-2.784	1.00 56.13	C
ATOM	2793	CB	GLU	A	181	30.543	-14.432	-1.393	1.00 56.53	C
ATOM	2796	CG	GLU	A	181	31.761	-14.311	-0.500	1.00 56.15	C
ATOM	2799	CD	GLU	A	181	31.764	-15.221	0.695	1.00 58.93	C
ATOM	2800	OE1	GLU	A	181	30.689	-15.799	0.952	1.00 63.12	O
ATOM	2801	OE2	GLU	A	181	32.849	-15.341	1.348	1.00 58.06	O
ATOM	2802	C	GLU	A	181	31.802	-12.698	-2.640	1.00 52.53	C
ATOM	2803	O	GLU	A	181	31.385	-11.655	-2.106	1.00 51.74	O
ATOM	2804	N	ASN	A	182	33.061	-12.845	-3.073	1.00 51.13	N
ATOM	2806	CA	ASN	A	182	34.102	-11.813	-2.936	1.00 47.84	C
ATOM	2808	CB	ASN	A	182	35.396	-12.431	-2.392	1.00 46.56	C
ATOM	2811	CG	ASN	A	182	35.351	-12.667	-0.891	1.00 46.60	C
ATOM	2812	OD1	ASN	A	182	34.761	-11.922	-0.093	1.00 45.34	O
ATOM	2813	ND2	ASN	A	182	36.004	-13.707	-0.499	1.00 47.84	N
ATOM	2816	C	ASN	A	182	34.383	-11.183	-4.272	1.00 47.77	C

ATOM	2817	O	ASN	A	182	35.383	-10.470	-4.441	1.00 45.91	O
ATOM	2818	N	CYS	A	183	33.503	-11.480	-5.236	1.00 50.13	N
ATOM	2820	CA	CYS	A	183	33.545	-10.849	-6.567	1.00 51.09	C
ATOM	2822	CB	CYS	A	183	32.578	-11.504	-7.579	1.00 53.48	C
ATOM	2825	SG	CYS	A	183	33.164	-13.146	-8.334	1.00 63.64	S
ATOM	2826	C	CYS	A	183	33.204	-9.376	-6.289	1.00 48.00	C
ATOM	2827	O	CYS	A	183	32.345	-9.091	-5.454	1.00 45.84	O
ATOM	2828	N	GLN	A	184	33.937	-8.507	-6.987	1.00 46.92	N
ATOM	2830	CA	GLN	A	184	33.621	-7.097	-7.082	1.00 47.29	C
ATOM	2832	CB	GLN	A	184	34.702	-6.286	-7.837	1.00 45.60	C
ATOM	2835	CG	GLN	A	184	34.313	-4.821	-8.086	1.00 46.53	C
ATOM	2838	CD	GLN	A	184	35.490	-3.732	-8.235	1.00 45.39	C
ATOM	2839	OE1	GLN	A	184	36.557	-3.993	-8.815	1.00 43.19	O
ATOM	2840	NE2	GLN	A	184	35.226	-2.509	-7.721	1.00 41.52	N
ATOM	2843	C	GLN	A	184	32.209	-6.922	-7.643	1.00 49.85	C
ATOM	2844	O	GLN	A	184	31.887	-7.418	-8.732	1.00 53.03	O
ATOM	2845	N	LYS	A	185	31.342	-6.271	-6.868	1.00 49.27	N
ATOM	2847	CA	LYS	A	185	30.086	-5.798	-7.441	1.00 51.63	C
ATOM	2849	CB	LYS	A	185	29.023	-5.620	-6.343	1.00 52.06	C
ATOM	2852	CG	LYS	A	185	28.517	-6.901	-5.629	1.00 53.93	C
ATOM	2855	CD	LYS	A	185	28.156	-6.583	-4.065	1.00 53.03	C
ATOM	2858	CE	LYS	A	185	28.695	-7.612	-3.059	1.00 49.07	C
ATOM	2861	NZ	LYS	A	185	27.572	-8.323	-2.540	1.00 54.03	N
ATOM	2865	C	LYS	A	185	30.318	-4.457	-8.218	1.00 50.18	C
ATOM	2866	O	LYS	A	185	30.983	-3.581	-7.726	1.00 49.13	O
ATOM	2867	N	LEU	A	186	29.780	-4.279	-9.412	1.00 52.33	N
ATOM	2869	CA	LEU	A	186	29.967	-3.001	-10.114	1.00 52.28	C
ATOM	2871	CB	LEU	A	186	30.613	-3.131	-11.493	1.00 53.18	C
ATOM	2874	CG	LEU	A	186	32.111	-3.758	-11.492	1.00 52.36	C
ATOM	2876	CD1	LEU	A	186	32.537	-4.107	-12.914	1.00 54.00	C
ATOM	2880	CD2	LEU	A	186	33.021	-2.930	-10.768	1.00 48.37	C
ATOM	2884	C	LEU	A	186	28.654	-2.280	-10.199	1.00 54.66	C
ATOM	2885	O	LEU	A	186	27.611	-2.903	-10.407	1.00 56.57	O
ATOM	2886	N	THR	A	187	28.725	-0.964	-9.972	1.00 54.57	N
ATOM	2888	CA	THR	A	187	27.587	-0.095	-10.035	1.00 57.60	C
ATOM	2890	CB	THR	A	187	27.054	0.099	-8.609	1.00 56.84	C
ATOM	2892	OG1	THR	A	187	28.131	0.506	-7.763	1.00 56.81	O
ATOM	2894	CG2	THR	A	187	26.549	-1.189	-7.960	1.00 55.84	C
ATOM	2898	C	THR	A	187	27.833	1.310	-10.662	1.00 59.12	C
ATOM	2899	O	THR	A	187	26.885	2.106	-10.684	1.00 60.17	O
ATOM	2900	N	LYS	A	188	29.051	1.629	-11.153	1.00 59.07	N
ATOM	2902	CA	LYS	A	188	29.350	2.969	-11.776	1.00 60.11	C
ATOM	2904	CB	LYS	A	188	30.430	3.762	-10.957	1.00 57.60	C
ATOM	2907	CG	LYS	A	188	30.704	5.336	-11.208	1.00 53.08	C
ATOM	2910	CD	LYS	A	188	31.704	6.033	-10.139	1.00 50.46	C
ATOM	2913	CE	LYS	A	188	32.508	7.420	-10.695	1.00 62.36	C
ATOM	2916	NZ	LYS	A	188	32.092	9.158	-10.925	1.00 56.57	N
ATOM	2920	C	LYS	A	188	29.771	2.735	-13.239	1.00 63.34	C
ATOM	2921	O	LYS	A	188	29.111	3.149	-14.157	1.00 66.50	O
ATOM	2922	N	ILE	A	189	30.843	1.998	-13.440	1.00 63.68	N
ATOM	2924	CA	ILE	A	189	31.424	1.690	-14.765	1.00 67.03	C
ATOM	2926	CB	ILE	A	189	32.738	0.990	-14.377	1.00 65.88	C
ATOM	2928	CG1	ILE	A	189	33.814	2.078	-14.376	1.00 68.15	C
ATOM	2931	CD1	ILE	A	189	34.948	1.628	-13.491	1.00 70.37	C
ATOM	2935	CG2	ILE	A	189	33.099	-0.237	-15.182	1.00 66.88	C
ATOM	2939	C	ILE	A	189	30.607	0.832	-15.788	1.00 70.02	C
ATOM	2940	O	ILE	A	189	30.992	0.629	-16.920	1.00 72.11	O
ATOM	2941	N	ILE	A	190	29.476	0.336	-15.338	1.00 70.44	N
ATOM	2943	CA	ILE	A	190	28.701	-0.687	-15.994	1.00 72.98	C
ATOM	2945	CB	ILE	A	190	28.515	-1.794	-14.937	1.00 70.63	C
ATOM	2947	CG1	ILE	A	190	29.637	-2.783	-15.140	1.00 71.22	C
ATOM	2950	CD1	ILE	A	190	29.307	-4.255	-14.645	1.00 76.22	C
ATOM	2954	CG2	ILE	A	190	27.125	-2.377	-14.917	1.00 71.99	C
ATOM	2958	C	ILE	A	190	27.366	-0.090	-16.413	1.00 76.24	C
ATOM	2959	O	ILE	A	190	26.564	-0.726	-17.119	1.00 79.79	O
ATOM	2960	N	CYS	A	191	27.136	1.143	-15.996	1.00 75.30	N
ATOM	2962	CA	CYS	A	191	25.844	1.785	-16.157	1.00 78.23	C
ATOM	2964	CB	CYS	A	191	25.752	2.923	-15.123	1.00 76.32	C

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ATOM 2967  SG  CYS A 191      26.102   2.238 -13.446  1.00 74.45           S
ATOM 2968  C   CYS A 191      25.605   2.255 -17.601  1.00 81.91           C
ATOM 2969  O   CYS A 191      26.543   2.581 -18.338  1.00 82.17           O
ATOM 2970  N   ALA A 192      24.346   2.227 -18.012  1.00 84.89           N
ATOM 2972  CA  ALA A 192      23.966   2.868 -19.251  1.00 89.58           C
ATOM 2974  CB  ALA A 192      22.450   2.842 -19.400  1.00 93.30           C
ATOM 2978  C   ALA A 192      24.506   4.339 -19.275  1.00 89.64           C
ATOM 2979  O   ALA A 192      24.639   4.980 -18.201  1.00 85.53           O
ATOM 2980  N   GLN A 193      24.836   4.846 -20.484  1.00 93.10           N
ATOM 2982  CA  GLN A 193      25.353   6.215 -20.616  1.00 94.09           C
ATOM 2984  CB  GLN A 193      25.538   6.634 -22.098  1.00 99.22           C
ATOM 2987  CG  GLN A 193      26.163   8.062 -22.297  1.00 99.92           C
ATOM 2990  CD  GLN A 193      25.933   8.638 -23.692  1.00108.02           C
ATOM 2991  OE1 GLN A 193      25.886   7.901 -24.675  1.00115.13           O
ATOM 2992  NE2 GLN A 193      25.800   9.955 -23.788  1.00112.64           N
ATOM 2995  C   GLN A 193      24.388   7.177 -19.901  1.00 94.51           C
ATOM 2996  O   GLN A 193      24.827   8.100 -19.208  1.00 92.51           O
ATOM 2997  N   GLN A 194      23.086   6.891 -20.050  1.00 97.35           N
ATOM 2999  CA  GLN A 194      21.973   7.735 -19.591  1.00 99.21           C
ATOM 3001  CB  GLN A 194      20.667   7.116 -20.142  1.00103.46           C
ATOM 3008  C   GLN A 194      21.839   8.015 -18.057  1.00 95.71           C
ATOM 3009  O   GLN A 194      21.013   8.809 -17.645  1.00 97.16           O
ATOM 3010  N   CYS A 195      22.633   7.364 -17.216  1.00 91.62           N
ATOM 3012  CA  CYS A 195      22.490   7.526 -15.791  1.00 88.83           C
ATOM 3014  CB  CYS A 195      22.917   6.292 -15.017  1.00 85.27           C
ATOM 3017  SG  CYS A 195      21.902   4.815 -15.196  1.00 90.56           S
ATOM 3018  C   CYS A 195      23.412   8.598 -15.346  1.00 86.94           C
ATOM 3019  O   CYS A 195      24.607   8.599 -15.680  1.00 85.07           O
ATOM 3020  N   SER A 196      22.858   9.456 -14.507  1.00 87.22           N
ATOM 3022  CA  SER A 196      23.627  10.438 -13.814  1.00 85.77           C
ATOM 3024  CB  SER A 196      22.648  11.354 -13.047  1.00 87.93           C
ATOM 3027  OG  SER A 196      22.540  11.018 -11.651  1.00 86.76           O
ATOM 3029  C   SER A 196      24.677   9.843 -12.839  1.00 81.16           C
ATOM 3030  O   SER A 196      25.573  10.557 -12.395  1.00 81.13           O
ATOM 3031  N   GLY A 197      24.538   8.580 -12.438  1.00 78.73           N
ATOM 3033  CA  GLY A 197      25.334   8.000 -11.342  1.00 73.56           C
ATOM 3036  C   GLY A 197      24.830   6.601 -11.007  1.00 72.09           C
ATOM 3037  O   GLY A 197      23.864   6.111 -11.623  1.00 75.94           O
ATOM 3038  N   ARG A 198      25.480   5.936 -10.068  1.00 67.34           N
ATOM 3040  CA  ARG A 198      25.152   4.530  -9.712  1.00 65.41           C
ATOM 3042  CB  ARG A 198      24.991   4.402  -8.192  1.00 63.68           C
ATOM 3045  CG  ARG A 198      26.212   4.737  -7.348  1.00 57.45           C
ATOM 3048  CD  ARG A 198      27.428   4.201  -7.931  1.00 54.35           C
ATOM 3051  NE  ARG A 198      28.605   4.632  -7.227  1.00 49.75           N
ATOM 3053  CZ  ARG A 198      29.670   3.892  -7.060  1.00 48.00           C
ATOM 3054  NH1 ARG A 198      29.696   2.647  -7.498  1.00 51.64           N
ATOM 3057  NH2 ARG A 198      30.717   4.384  -6.450  1.00 45.20           N
ATOM 3060  C   ARG A 198      23.916   3.831 -10.309  1.00 67.96           C
ATOM 3061  O   ARG A 198      22.865   4.429 -10.482  1.00 69.74           O
ATOM 3062  N   CYS A 199      24.066   2.517 -10.533  1.00 68.17           N
ATOM 3064  CA  CYS A 199      22.980   1.584 -11.035  1.00 70.76           C
ATOM 3066  CB  CYS A 199      23.028   1.453 -12.552  1.00 73.17           C
ATOM 3069  SG  CYS A 199      24.620   0.814 -13.123  1.00 70.86           S
ATOM 3070  C   CYS A 199      23.083   0.184 -10.385  1.00 68.65           C
ATOM 3071  O   CYS A 199      23.915  -0.044  -9.450  1.00 65.70           O
ATOM 3072  N   ARG A 200      22.214  -0.730 -10.837  1.00 70.83           N
ATOM 3074  CA  ARG A 200      22.179  -2.148 -10.359  1.00 69.39           C
ATOM 3076  CB  ARG A 200      21.098  -2.232  -9.299  1.00 70.45           C
ATOM 3079  CG  ARG A 200      19.798  -1.633  -9.740  1.00 73.74           C
ATOM 3082  CD  ARG A 200      18.746  -1.838  -8.754  1.00 76.36           C
ATOM 3085  NE  ARG A 200      17.429  -1.744  -9.348  1.00 82.84           N
ATOM 3087  CZ  ARG A 200      16.411  -2.522  -9.015  1.00 86.81           C
ATOM 3088  NH1 ARG A 200      16.540  -3.467  -8.083  1.00 85.55           N
ATOM 3091  NH2 ARG A 200      15.245  -2.346  -9.616  1.00 92.94           N
ATOM 3094  C   ARG A 200      21.932  -3.214 -11.467  1.00 71.45           C
ATOM 3095  O   ARG A 200      21.777  -4.416 -11.236  1.00 71.97           O
ATOM 3096  N   GLY A 201      21.869  -2.714 -12.673  1.00 73.31           N
ATOM 3098  CA  GLY A 201      21.586  -3.476 -13.847  1.00 77.37           C
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ATOM	3101	C	GLY	A	201	22.227	-2.705	-14.954	1.00	78.01	C
ATOM	3102	O	GLY	A	201	22.616	-1.565	-14.732	1.00	76.98	O
ATOM	3103	N	LYS	A	202	22.386	-3.322	-16.117	1.00	80.54	N
ATOM	3105	CA	LYS	A	202	23.135	-2.699	-17.185	1.00	81.72	C
ATOM	3107	CB	LYS	A	202	23.959	-3.720	-18.012	1.00	81.81	C
ATOM	3114	C	LYS	A	202	22.129	-1.884	-17.999	1.00	86.87	C
ATOM	3115	O	LYS	A	202	22.526	-1.153	-18.906	1.00	88.82	O
ATOM	3116	N	SER	A	203	20.842	-1.953	-17.613	1.00	89.89	N
ATOM	3118	CA	SER	A	203	19.704	-1.280	-18.316	1.00	94.97	C
ATOM	3120	CB	SER	A	203	18.414	-2.065	-18.031	1.00	98.06	C
ATOM	3123	OG	SER	A	203	18.209	-2.178	-16.619	1.00	96.46	O
ATOM	3125	C	SER	A	203	19.442	0.215	-17.938	1.00	94.60	C
ATOM	3126	O	SER	A	203	19.990	0.716	-16.921	1.00	89.96	O
ATOM	3127	N	PRO	A	204	18.628	0.908	-18.767	1.00	99.08	N
ATOM	3128	CA	PRO	A	204	18.061	2.235	-18.420	1.00	99.90	C
ATOM	3130	CB	PRO	A	204	17.375	2.695	-19.710	1.00	105.95	C
ATOM	3133	CG	PRO	A	204	17.293	1.497	-20.624	1.00	108.00	C
ATOM	3136	CD	PRO	A	204	18.277	0.493	-20.142	1.00	103.68	C
ATOM	3139	C	PRO	A	204	17.048	2.246	-17.273	1.00	100.16	C
ATOM	3140	O	PRO	A	204	17.060	3.133	-16.434	1.00	98.31	O
ATOM	3141	N	SER	A	205	16.173	1.267	-17.206	1.00	102.97	N
ATOM	3143	CA	SER	A	205	15.376	1.118	-15.992	1.00	103.18	C
ATOM	3145	CB	SER	A	205	14.395	-0.004	-16.148	1.00	107.04	C
ATOM	3148	OG	SER	A	205	15.123	-1.122	-16.565	1.00	106.57	O
ATOM	3150	C	SER	A	205	16.237	0.823	-14.770	1.00	97.64	C
ATOM	3151	O	SER	A	205	15.875	1.164	-13.651	1.00	97.84	O
ATOM	3152	N	ASP	A	206	17.401	0.227	-14.948	1.00	94.14	N
ATOM	3154	CA	ASP	A	206	18.244	-0.075	-13.781	1.00	88.73	C
ATOM	3156	CB	ASP	A	206	19.266	-1.183	-14.155	1.00	86.17	C
ATOM	3162	C	ASP	A	206	18.932	1.144	-13.099	1.00	84.68	C
ATOM	3163	O	ASP	A	206	19.810	0.969	-12.300	1.00	80.94	O
ATOM	3164	N	CYS	A	207	18.545	2.373	-13.378	1.00	86.84	N
ATOM	3166	CA	CYS	A	207	19.279	3.512	-12.786	1.00	84.84	C
ATOM	3168	CB	CYS	A	207	19.006	4.782	-13.567	1.00	88.15	C
ATOM	3171	SG	CYS	A	207	19.830	4.949	-15.177	1.00	93.16	S
ATOM	3172	C	CYS	A	207	18.945	3.809	-11.311	1.00	82.80	C
ATOM	3173	O	CYS	A	207	17.821	3.524	-10.885	1.00	85.48	O
ATOM	3174	N	CYS	A	208	19.915	4.385	-10.561	1.00	78.90	N
ATOM	3176	CA	CYS	A	208	19.749	4.786	-9.117	1.00	76.99	C
ATOM	3178	CB	CYS	A	208	20.959	4.473	-8.200	1.00	71.82	C
ATOM	3181	SG	CYS	A	208	21.335	2.712	-7.852	1.00	71.46	S
ATOM	3182	C	CYS	A	208	19.496	6.275	-9.006	1.00	77.75	C
ATOM	3183	O	CYS	A	208	20.107	7.074	-9.710	1.00	76.69	O
ATOM	3184	N	HIS	A	209	18.607	6.637	-8.092	1.00	79.28	N
ATOM	3186	CA	HIS	A	209	18.280	8.040	-7.879	1.00	81.28	C
ATOM	3188	CB	HIS	A	209	17.372	8.223	-6.680	1.00	82.57	C
ATOM	3191	CG	HIS	A	209	16.907	9.628	-6.457	1.00	86.38	C
ATOM	3192	ND1	HIS	A	209	15.853	10.170	-7.198	1.00	94.24	N
ATOM	3194	CE1	HIS	A	209	15.655	11.421	-6.809	1.00	96.56	C
ATOM	3196	NE2	HIS	A	209	16.568	11.718	-5.902	1.00	91.93	N
ATOM	3198	CD2	HIS	A	209	17.357	10.610	-5.691	1.00	86.90	C
ATOM	3200	C	HIS	A	209	19.551	8.845	-7.694	1.00	78.10	C
ATOM	3201	O	HIS	A	209	20.510	8.343	-7.144	1.00	73.89	O
ATOM	3202	N	ASN	A	210	19.543	10.089	-8.168	1.00	80.56	N
ATOM	3204	CA	ASN	A	210	20.717	10.936	-8.164	1.00	78.95	C
ATOM	3206	CB	ASN	A	210	20.251	12.335	-8.576	1.00	83.73	C
ATOM	3209	CG	ASN	A	210	21.408	13.355	-8.850	1.00	85.95	C
ATOM	3210	OD1	ASN	A	210	22.542	13.249	-8.323	1.00	81.95	O
ATOM	3211	ND2	ASN	A	210	21.065	14.416	-9.643	1.00	92.19	N
ATOM	3214	C	ASN	A	210	21.360	10.886	-6.758	1.00	75.18	C
ATOM	3215	O	ASN	A	210	22.583	10.777	-6.639	1.00	72.10	O
ATOM	3216	N	GLN	A	211	20.516	10.873	-5.716	1.00	75.07	N
ATOM	3218	CA	GLN	A	211	20.930	10.869	-4.335	1.00	71.75	C
ATOM	3220	CB	GLN	A	211	19.728	11.029	-3.403	1.00	73.99	C
ATOM	3223	CG	GLN	A	211	18.918	12.325	-3.575	1.00	77.34	C
ATOM	3226	CD	GLN	A	211	19.620	13.572	-3.094	1.00	73.73	C
ATOM	3227	OE1	GLN	A	211	20.318	13.552	-2.113	1.00	70.44	O
ATOM	3228	NE2	GLN	A	211	19.431	14.657	-3.802	1.00	77.44	N

ATOM	3231	C	GLN	A	211	21.690	9.671	-3.809	1.00 68.89	C
ATOM	3232	O	GLN	A	211	22.103	9.730	-2.654	1.00 68.37	O
ATOM	3233	N	CYS	A	212	21.895	8.585	-4.561	1.00 68.32	N
ATOM	3235	CA	CYS	A	212	22.445	7.341	-3.952	1.00 65.45	C
ATOM	3237	CB	CYS	A	212	21.877	6.071	-4.588	1.00 66.69	C
ATOM	3240	SG	CYS	A	212	20.095	5.933	-4.285	1.00 74.19	S
ATOM	3241	C	CYS	A	212	23.942	7.262	-3.984	1.00 61.86	C
ATOM	3242	O	CYS	A	212	24.613	7.907	-4.833	1.00 61.22	O
ATOM	3243	N	ALA	A	213	24.468	6.458	-3.056	1.00 59.19	N
ATOM	3245	CA	ALA	A	213	25.877	6.519	-2.765	1.00 56.34	C
ATOM	3247	CB	ALA	A	213	26.105	6.720	-1.392	1.00 55.01	C
ATOM	3251	C	ALA	A	213	26.611	5.295	-3.245	1.00 54.74	C
ATOM	3252	O	ALA	A	213	27.718	5.456	-3.821	1.00 54.91	O
ATOM	3253	N	ALA	A	214	26.052	4.111	-3.043	1.00 54.09	N
ATOM	3255	CA	ALA	A	214	26.786	2.893	-3.436	1.00 52.51	C
ATOM	3257	CB	ALA	A	214	26.982	2.055	-2.300	1.00 50.79	C
ATOM	3261	C	ALA	A	214	26.086	2.088	-4.486	1.00 55.33	C
ATOM	3262	O	ALA	A	214	26.726	1.278	-5.148	1.00 55.72	O
ATOM	3263	N	GLY	A	215	24.783	2.329	-4.653	1.00 58.27	N
ATOM	3265	CA	GLY	A	215	23.914	1.484	-5.445	1.00 60.72	C
ATOM	3268	C	GLY	A	215	22.512	1.447	-4.858	1.00 63.18	C
ATOM	3269	O	GLY	A	215	22.195	2.220	-3.951	1.00 62.63	O
ATOM	3270	N	CYS	A	216	21.657	0.574	-5.394	1.00 65.69	N
ATOM	3272	CA	CYS	A	216	20.258	0.586	-4.964	1.00 69.24	C
ATOM	3274	CB	CYS	A	216	19.535	1.716	-5.650	1.00 72.29	C
ATOM	3277	SG	CYS	A	216	19.657	1.623	-7.430	1.00 74.13	S
ATOM	3278	C	CYS	A	216	19.447	-0.665	-5.227	1.00 71.77	C
ATOM	3279	O	CYS	A	216	19.886	-1.583	-5.916	1.00 71.93	O
ATOM	3280	N	THR	A	217	18.233	-0.626	-4.696	1.00 73.98	N
ATOM	3282	CA	THR	A	217	17.304	-1.724	-4.665	1.00 76.58	C
ATOM	3284	CB	THR	A	217	16.933	-1.861	-3.231	1.00 76.60	C
ATOM	3286	OG1	THR	A	217	18.073	-2.376	-2.558	1.00 71.61	O
ATOM	3288	CG2	THR	A	217	15.797	-2.863	-2.987	1.00 81.96	C
ATOM	3292	C	THR	A	217	16.089	-1.360	-5.465	1.00 81.10	C
ATOM	3293	O	THR	A	217	15.039	-1.958	-5.310	1.00 84.07	O
ATOM	3294	N	GLY	A	218	16.232	-0.341	-6.305	1.00 81.30	N
ATOM	3296	CA	GLY	A	218	15.083	0.262	-6.937	1.00 86.06	C
ATOM	3299	C	GLY	A	218	15.298	1.697	-7.356	1.00 85.69	C
ATOM	3300	O	GLY	A	218	16.323	2.320	-7.062	1.00 81.26	O
ATOM	3301	N	PRO	A	219	14.270	2.229	-8.003	1.00 90.50	N
ATOM	3302	CA	PRO	A	219	14.353	3.496	-8.749	1.00 91.95	C
ATOM	3304	CB	PRO	A	219	12.956	3.600	-9.384	1.00 98.27	C
ATOM	3307	CG	PRO	A	219	12.042	2.762	-8.489	1.00 99.76	C
ATOM	3310	CD	PRO	A	219	12.909	1.656	-8.018	1.00 95.47	C
ATOM	3313	C	PRO	A	219	14.624	4.769	-7.946	1.00 90.33	C
ATOM	3314	O	PRO	A	219	15.405	5.591	-8.349	1.00 88.23	O
ATOM	3315	N	ARG	A	220	13.981	4.904	-6.810	1.00 91.91	N
ATOM	3317	CA	ARG	A	220	13.738	6.217	-6.233	1.00 93.99	C
ATOM	3319	CB	ARG	A	220	12.218	6.360	-5.904	1.00100.22	C
ATOM	3322	CG	ARG	A	220	11.634	5.167	-5.100	1.00102.19	C
ATOM	3325	CD	ARG	A	220	10.103	5.144	-4.836	1.00109.43	C
ATOM	3328	NE	ARG	A	220	9.740	3.785	-4.386	1.00111.00	N
ATOM	3330	CZ	ARG	A	220	8.505	3.358	-4.091	1.00115.28	C
ATOM	3331	NH1	ARG	A	220	7.446	4.179	-4.177	1.00118.66	N
ATOM	3334	NH2	ARG	A	220	8.347	2.087	-3.696	1.00114.53	N
ATOM	3337	C	ARG	A	220	14.631	6.612	-5.014	1.00 89.71	C
ATOM	3338	O	ARG	A	220	15.450	5.829	-4.543	1.00 86.23	O
ATOM	3339	N	GLU	A	221	14.468	7.873	-4.587	1.00 90.79	N
ATOM	3341	CA	GLU	A	221	14.998	8.469	-3.350	1.00 88.14	C
ATOM	3343	CB	GLU	A	221	14.054	9.612	-2.885	1.00 92.21	C
ATOM	3346	CG	GLU	A	221	13.975	10.853	-3.765	1.00 95.00	C
ATOM	3349	CD	GLU	A	221	12.697	10.962	-4.627	1.00103.69	C
ATOM	3350	OE1	GLU	A	221	12.320	9.931	-5.267	1.00106.17	O
ATOM	3351	OE2	GLU	A	221	12.071	12.079	-4.702	1.00106.53	O
ATOM	3352	C	GLU	A	221	15.116	7.478	-2.181	1.00 86.16	C
ATOM	3353	O	GLU	A	221	16.103	7.484	-1.457	1.00 82.16	O
ATOM	3354	N	SER	A	222	14.086	6.661	-1.965	1.00 89.43	N
ATOM	3356	CA	SER	A	222	14.027	5.806	-0.769	1.00 88.57	C

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ATOM 3358  CB  SER A 222      12.580   5.683  -0.281  1.00 93.94           C
ATOM 3361  OG  SER A 222      11.809   4.919  -1.194  1.00 96.86           O
ATOM 3363  C   SER A 222      14.640   4.395  -0.949  1.00 85.65           C
ATOM 3364  O   SER A 222      14.676   3.619   0.016  1.00 85.41           O
ATOM 3365  N   ASP A 223      15.135   4.061  -2.150  1.00 83.69           N
ATOM 3367  CA  ASP A 223      15.657   2.711  -2.417  1.00 80.96           C
ATOM 3369  CB  ASP A 223      15.185   2.195  -3.776  1.00 83.33           C
ATOM 3372  CG  ASP A 223      13.703   2.299  -3.944  1.00 89.14           C
ATOM 3373  OD1 ASP A 223      12.981   1.875  -3.024  1.00 91.08           O
ATOM 3374  OD2 ASP A 223      13.165   2.800  -4.951  1.00 92.92           O
ATOM 3375  C   ASP A 223      17.171   2.672  -2.346  1.00 75.27           C
ATOM 3376  O   ASP A 223      17.825   1.737  -2.855  1.00 73.21           O
ATOM 3377  N   CYS A 224      17.746   3.656  -1.683  1.00 72.71           N
ATOM 3379  CA  CYS A 224      19.181   3.736  -1.655  1.00 67.99           C
ATOM 3381  CB  CYS A 224      19.598   5.080  -1.135  1.00 67.67           C
ATOM 3384  SG  CYS A 224      19.506   6.395  -2.344  1.00 70.46           S
ATOM 3385  C   CYS A 224      19.754   2.694  -0.764  1.00 64.94           C
ATOM 3386  O   CYS A 224      19.110   2.246  -0.162  1.00 65.66           O
ATOM 3387  N   LEU A 225      20.979   2.321  -1.078  1.00 61.70           N
ATOM 3389  CA  LEU A 225      21.782   1.447  -0.245  1.00 59.61           C
ATOM 3391  CB  LEU A 225      22.986   0.868  -1.023  1.00 56.35           C
ATOM 3394  CG  LEU A 225      22.685  -0.402  -1.891  1.00 56.31           C
ATOM 3396  CD1 LEU A 225      23.880  -0.866  -2.679  1.00 51.61           C
ATOM 3400  CD2 LEU A 225      22.126  -1.570  -1.021  1.00 56.37           C
ATOM 3404  C   LEU A 225      22.260   2.296   0.878  1.00 59.46           C
ATOM 3405  O   LEU A 225      22.097   1.964   2.032  1.00 60.50           O
ATOM 3406  N   VAL A 226      22.876   3.410   0.501  1.00 59.46           N
ATOM 3408  CA  VAL A 226      23.450   4.366   1.417  1.00 58.35           C
ATOM 3410  CB  VAL A 226      25.010   4.197   1.616  1.00 54.93           C
ATOM 3412  CG1 VAL A 226      25.384   4.755   2.905  1.00 57.11           C
ATOM 3416  CG2 VAL A 226      25.449   2.804   1.665  1.00 54.18           C
ATOM 3420  C   VAL A 226      23.165   5.729   0.779  1.00 59.60           C
ATOM 3421  O   VAL A 226      22.958   5.810  -0.407  1.00 60.42           O
ATOM 3422  N   CYS A 227      23.138   6.793   1.574  1.00 60.27           N
ATOM 3424  CA  CYS A 227      22.873   8.110   1.052  1.00 62.07           C
ATOM 3426  CB  CYS A 227      22.091   8.926   2.031  1.00 64.54           C
ATOM 3429  SG  CYS A 227      20.427   8.315   2.115  1.00 71.77           S
ATOM 3430  C   CYS A 227      24.164   8.781   0.891  1.00 59.58           C
ATOM 3431  O   CYS A 227      25.088   8.519   1.662  1.00 57.51           O
ATOM 3432  N   ARG A 228      24.235   9.677  -0.087  1.00 60.72           N
ATOM 3434  CA  ARG A 228      25.465  10.401  -0.289  1.00 58.88           C
ATOM 3436  CB  ARG A 228      25.938  10.420  -1.728  1.00 58.79           C
ATOM 3439  CG  ARG A 228      25.066  10.857  -2.770  1.00 60.60           C
ATOM 3442  CD  ARG A 228      25.870  11.291  -4.034  1.00 60.85           C
ATOM 3445  NE  ARG A 228      25.464  12.688  -4.273  1.00 66.58           N
ATOM 3447  CZ  ARG A 228      25.007  13.147  -5.391  1.00 68.99           C
ATOM 3448  NH1 ARG A 228      24.950  12.391  -6.479  1.00 73.85           N
ATOM 3451  NH2 ARG A 228      24.612  14.369  -5.438  1.00 73.63           N
ATOM 3454  C   ARG A 228      25.487  11.753   0.315  1.00 60.04           C
ATOM 3455  O   ARG A 228      26.542  12.340   0.407  1.00 59.64           O
ATOM 3456  N   LYS A 229      24.352  12.222   0.791  1.00 62.48           N
ATOM 3458  CA  LYS A 229      24.353  13.442   1.549  1.00 63.66           C
ATOM 3460  CB  LYS A 229      23.648  14.573   0.792  1.00 67.05           C
ATOM 3463  CG  LYS A 229      24.518  15.066  -0.385  1.00 67.47           C
ATOM 3466  CD  LYS A 229      23.831  16.061  -1.381  1.00 73.70           C
ATOM 3469  CE  LYS A 229      24.848  16.474  -2.543  1.00 75.33           C
ATOM 3472  NZ  LYS A 229      24.415  17.315  -3.811  1.00 79.07           N
ATOM 3476  C   LYS A 229      23.794  13.092   2.898  1.00 63.63           C
ATOM 3477  O   LYS A 229      24.536  12.696   3.782  1.00 61.98           O
ATOM 3478  N   PHE A 230      22.501  13.163   3.054  1.00 66.52           N
ATOM 3480  CA  PHE A 230      21.906  12.856   4.332  1.00 68.08           C
ATOM 3482  CB  PHE A 230      21.322  14.129   4.906  1.00 71.57           C
ATOM 3485  CG  PHE A 230      22.344  15.070   5.540  1.00 72.46           C
ATOM 3486  CD1 PHE A 230      22.787  16.209   4.888  1.00 74.10           C
ATOM 3488  CE1 PHE A 230      23.692  17.117   5.502  1.00 74.49           C
ATOM 3490  CZ  PHE A 230      24.146  16.887   6.773  1.00 74.16           C
ATOM 3492  CE2 PHE A 230      23.716  15.748   7.443  1.00 73.51           C
ATOM 3494  CD2 PHE A 230      22.800  14.859   6.831  1.00 74.05           C
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ATOM	3496	C	PHE	A	230	20.816	11.770	4.136	1.00	69.44	C
ATOM	3497	O	PHE	A	230	20.160	11.708	3.069	1.00	71.17	O
ATOM	3498	N	ARG	A	231	20.676	10.891	5.130	1.00	68.61	N
ATOM	3500	CA	ARG	A	231	19.584	9.915	5.195	1.00	70.29	C
ATOM	3502	CB	ARG	A	231	20.074	8.526	5.708	1.00	67.41	C
ATOM	3511	C	ARG	A	231	18.552	10.519	6.134	1.00	74.06	C
ATOM	3512	O	ARG	A	231	18.922	11.069	7.149	1.00	73.47	O
ATOM	3513	N	ASP	A	232	17.274	10.431	5.798	1.00	78.37	N
ATOM	3515	CA	ASP	A	232	16.234	10.971	6.662	1.00	84.33	C
ATOM	3517	CB	ASP	A	232	15.144	11.728	5.891	1.00	88.64	C
ATOM	3520	CG	ASP	A	232	14.232	12.510	6.806	1.00	92.77	C
ATOM	3521	OD1	ASP	A	232	14.285	12.270	8.018	1.00	92.46	O
ATOM	3522	OD2	ASP	A	232	13.441	13.392	6.417	1.00	96.60	O
ATOM	3523	C	ASP	A	232	15.612	9.869	7.492	1.00	87.11	C
ATOM	3524	O	ASP	A	232	15.962	9.695	8.668	1.00	88.04	O
ATOM	3525	N	GLU	A	233	14.665	9.150	6.910	1.00	89.56	N
ATOM	3527	CA	GLU	A	233	13.976	8.117	7.627	1.00	91.75	C
ATOM	3529	CB	GLU	A	233	12.599	8.613	8.111	1.00	97.99	C
ATOM	3532	CG	GLU	A	233	12.519	8.786	9.622	1.00	100.66	C
ATOM	3535	CD	GLU	A	233	11.380	9.704	10.061	1.00	109.45	C
ATOM	3536	OE1	GLU	A	233	10.502	9.995	9.208	1.00	113.90	O
ATOM	3537	OE2	GLU	A	233	11.348	10.144	11.258	1.00	112.63	O
ATOM	3538	C	GLU	A	233	13.901	7.127	6.539	1.00	90.22	C
ATOM	3539	O	GLU	A	233	12.882	6.953	5.916	1.00	94.09	O
ATOM	3540	N	ALA	A	234	15.026	6.560	6.197	1.00	85.19	N
ATOM	3542	CA	ALA	A	234	15.025	5.743	4.982	1.00	84.82	C
ATOM	3544	CB	ALA	A	234	13.817	4.741	5.027	1.00	88.93	C
ATOM	3548	C	ALA	A	234	15.060	6.514	3.595	1.00	84.64	C
ATOM	3549	O	ALA	A	234	15.340	5.900	2.543	1.00	83.37	O
ATOM	3550	N	THR	A	235	14.790	7.827	3.601	1.00	85.96	N
ATOM	3552	CA	THR	A	235	14.869	8.675	2.402	1.00	85.56	C
ATOM	3554	CB	THR	A	235	13.751	9.674	2.489	1.00	90.41	C
ATOM	3556	OG1	THR	A	235	12.551	8.977	2.820	1.00	94.00	O
ATOM	3558	CG2	THR	A	235	13.455	10.298	1.155	1.00	91.65	C
ATOM	3562	C	THR	A	235	16.208	9.413	2.264	1.00	81.37	C
ATOM	3563	O	THR	A	235	16.840	9.680	3.237	1.00	80.40	O
ATOM	3564	N	CYS	A	236	16.631	9.764	1.059	1.00	80.26	N
ATOM	3566	CA	CYS	A	236	17.911	10.456	0.845	1.00	76.60	C
ATOM	3568	CB	CYS	A	236	18.705	9.695	-0.191	1.00	73.69	C
ATOM	3571	SG	CYS	A	236	19.452	8.145	0.356	1.00	71.68	S
ATOM	3572	C	CYS	A	236	17.771	11.919	0.358	1.00	78.31	C
ATOM	3573	O	CYS	A	236	17.255	12.169	-0.717	1.00	80.49	O
ATOM	3574	N	LYS	A	237	18.295	12.873	1.114	1.00	77.15	N
ATOM	3576	CA	LYS	A	237	18.017	14.294	0.879	1.00	79.48	C
ATOM	3578	CB	LYS	A	237	17.178	14.842	2.038	1.00	82.43	C
ATOM	3581	CG	LYS	A	237	16.038	13.951	2.407	1.00	84.83	C
ATOM	3584	CD	LYS	A	237	15.070	14.580	3.357	1.00	90.16	C
ATOM	3587	CE	LYS	A	237	13.746	13.819	3.358	1.00	94.88	C
ATOM	3590	NZ	LYS	A	237	12.689	14.539	4.103	1.00	102.61	N
ATOM	3594	C	LYS	A	237	19.292	15.106	0.759	1.00	76.46	C
ATOM	3595	O	LYS	A	237	20.312	14.741	1.276	1.00	72.36	O
ATOM	3596	N	ASP	A	238	19.216	16.234	0.079	1.00	78.98	N
ATOM	3598	CA	ASP	A	238	20.321	17.193	0.047	1.00	77.64	C
ATOM	3600	CB	ASP	A	238	19.975	18.348	-0.895	1.00	81.85	C
ATOM	3603	CG	ASP	A	238	19.772	17.891	-2.338	1.00	82.50	C
ATOM	3604	OD1	ASP	A	238	20.406	16.888	-2.690	1.00	80.05	O
ATOM	3605	OD2	ASP	A	238	19.015	18.454	-3.170	1.00	84.38	O
ATOM	3606	C	ASP	A	238	20.641	17.763	1.424	1.00	76.62	C
ATOM	3607	O	ASP	A	238	21.770	18.114	1.707	1.00	73.74	O
ATOM	3608	N	THR	A	239	19.645	17.833	2.290	1.00	79.33	N
ATOM	3610	CA	THR	A	239	19.820	18.465	3.586	1.00	80.08	C
ATOM	3612	CB	THR	A	239	19.799	20.008	3.363	1.00	84.18	C
ATOM	3614	OG1	THR	A	239	20.373	20.685	4.484	1.00	83.41	O
ATOM	3616	CG2	THR	A	239	18.371	20.544	3.222	1.00	88.96	C
ATOM	3620	C	THR	A	239	18.769	18.064	4.591	1.00	82.04	C
ATOM	3621	O	THR	A	239	17.690	17.627	4.250	1.00	84.18	O
ATOM	3622	N	CYS	A	240	19.076	18.261	5.847	1.00	82.76	N
ATOM	3624	CA	CYS	A	240	18.073	18.046	6.850	1.00	87.41	C

ATOM	3626	CB	CYS	A	240	18.686	17.977	8.227	1.00 85.89	C
ATOM	3629	SG	CYS	A	240	19.820	16.589	8.264	1.00 84.87	S
ATOM	3630	C	CYS	A	240	17.039	19.132	6.784	1.00 93.59	C
ATOM	3631	O	CYS	A	240	17.356	20.313	6.683	1.00 95.73	O
ATOM	3632	N	PRO	A	241	15.780	18.740	6.812	1.00 55.04	N
ATOM	3633	CA	PRO	A	241	14.682	19.707	6.985	1.00 56.88	C
ATOM	3635	CB	PRO	A	241	13.431	18.836	7.235	1.00 58.19	C
ATOM	3638	CG	PRO	A	241	13.919	17.393	7.321	1.00 57.06	C
ATOM	3641	CD	PRO	A	241	15.281	17.357	6.687	1.00 54.91	C
ATOM	3644	C	PRO	A	241	14.936	20.540	8.198	1.00 57.83	C
ATOM	3645	O	PRO	A	241	15.201	20.028	9.281	1.00 57.58	O
ATOM	3646	N	PRO	A	242	14.852	21.827	8.038	1.00 58.40	N
ATOM	3647	CA	PRO	A	242	15.392	22.690	9.071	1.00 59.18	C
ATOM	3649	CB	PRO	A	242	15.812	23.929	8.325	1.00 59.59	C
ATOM	3652	CG	PRO	A	242	15.087	23.771	6.931	1.00 60.42	C
ATOM	3655	CD	PRO	A	242	14.198	22.555	6.961	1.00 58.64	C
ATOM	3658	C	PRO	A	242	14.349	22.986	10.097	1.00 60.49	C
ATOM	3659	O	PRO	A	242	13.169	22.609	9.956	1.00 58.83	O
ATOM	3660	N	LEU	A	243	14.859	23.681	11.113	1.00 61.42	N
ATOM	3662	CA	LEU	A	243	14.198	23.925	12.387	1.00 63.21	C
ATOM	3664	CB	LEU	A	243	15.253	24.301	13.402	1.00 63.51	C
ATOM	3667	CG	LEU	A	243	16.030	23.016	13.747	1.00 64.54	C
ATOM	3669	CD1	LEU	A	243	17.404	23.380	14.430	1.00 64.32	C
ATOM	3673	CD2	LEU	A	243	15.119	21.989	14.577	1.00 64.65	C
ATOM	3677	C	LEU	A	243	13.212	25.037	12.331	1.00 64.28	C
ATOM	3678	O	LEU	A	243	12.271	25.089	13.119	1.00 65.42	O
ATOM	3679	N	MET	A	244	13.425	25.919	11.372	1.00 63.70	N
ATOM	3681	CA	MET	A	244	12.606	27.066	11.251	1.00 65.18	C
ATOM	3683	CB	MET	A	244	13.312	28.151	11.980	1.00 65.81	C
ATOM	3686	CG	MET	A	244	13.551	27.784	13.412	1.00 66.25	C
ATOM	3689	SD	MET	A	244	13.078	29.142	14.347	1.00 72.32	S
ATOM	3690	CE	MET	A	244	11.731	28.403	15.295	1.00 73.17	C
ATOM	3694	C	MET	A	244	12.399	27.474	9.833	1.00 65.08	C
ATOM	3695	O	MET	A	244	13.312	27.447	9.054	1.00 63.58	O
ATOM	3696	N	LEU	A	245	11.177	27.876	9.529	1.00 67.08	N
ATOM	3698	CA	LEU	A	245	10.803	28.355	8.241	1.00 67.76	C
ATOM	3700	CB	LEU	A	245	9.739	27.435	7.703	1.00 68.55	C
ATOM	3703	CG	LEU	A	245	10.253	26.021	7.432	1.00 67.01	C
ATOM	3705	CD1	LEU	A	245	9.067	25.110	7.212	1.00 68.07	C
ATOM	3709	CD2	LEU	A	245	11.187	25.963	6.238	1.00 65.23	C
ATOM	3713	C	LEU	A	245	10.185	29.719	8.344	1.00 70.42	C
ATOM	3714	O	LEU	A	245	9.435	29.957	9.281	1.00 71.97	O
ATOM	3715	N	TYR	A	246	10.457	30.590	7.355	1.00 70.54	N
ATOM	3717	CA	TYR	A	246	9.619	31.746	7.100	1.00 72.93	C
ATOM	3719	CB	TYR	A	246	10.028	32.498	5.833	1.00 72.99	C
ATOM	3722	CG	TYR	A	246	9.424	33.903	5.785	1.00 76.04	C
ATOM	3723	CD1	TYR	A	246	10.123	34.980	6.284	1.00 76.12	C
ATOM	3725	CE1	TYR	A	246	9.595	36.220	6.294	1.00 78.89	C
ATOM	3727	CZ	TYR	A	246	8.358	36.417	5.810	1.00 80.72	C
ATOM	3728	OH	TYR	A	246	7.871	37.715	5.849	1.00 84.16	O
ATOM	3730	CE2	TYR	A	246	7.616	35.344	5.325	1.00 79.96	C
ATOM	3732	CD2	TYR	A	246	8.134	34.126	5.310	1.00 76.25	C
ATOM	3734	C	TYR	A	246	8.167	31.318	6.950	1.00 75.65	C
ATOM	3735	O	TYR	A	246	7.842	30.513	6.113	1.00 75.18	O
ATOM	3736	N	ASN	A	247	7.289	31.893	7.749	1.00 79.06	N
ATOM	3738	CA	ASN	A	247	5.865	31.606	7.710	1.00 81.97	C
ATOM	3740	CB	ASN	A	247	5.369	31.485	9.144	1.00 83.33	C
ATOM	3743	CG	ASN	A	247	4.117	30.711	9.248	1.00 86.35	C
ATOM	3744	OD1	ASN	A	247	3.048	31.184	8.805	1.00 90.91	O
ATOM	3745	ND2	ASN	A	247	4.212	29.494	9.824	1.00 83.97	N
ATOM	3748	C	ASN	A	247	5.152	32.746	7.008	1.00 84.93	C
ATOM	3749	O	ASN	A	247	5.206	33.878	7.458	1.00 85.90	O
ATOM	3750	N	PRO	A	248	4.500	32.451	5.903	1.00 86.39	N
ATOM	3751	CA	PRO	A	248	3.782	33.478	5.096	1.00 90.09	C
ATOM	3753	CB	PRO	A	248	3.144	32.675	3.968	1.00 90.03	C
ATOM	3756	CG	PRO	A	248	3.918	31.316	3.957	1.00 86.36	C
ATOM	3759	CD	PRO	A	248	4.423	31.092	5.346	1.00 84.43	C
ATOM	3762	C	PRO	A	248	2.673	34.251	5.837	1.00 94.90	C

ATOM	3763	O	PRO	A	248	2.511	35.494	5.688	1.00	96.88	O
ATOM	3764	N	THR	A	249	1.905	33.491	6.619	1.00	96.37	N
ATOM	3766	CA	THR	A	249	0.842	34.054	7.446	1.00	101.00	C
ATOM	3768	CB	THR	A	249	-0.184	32.930	7.919	1.00	102.23	C
ATOM	3770	OG1	THR	A	249	-1.321	32.895	7.044	1.00	104.68	O
ATOM	3772	CG2	THR	A	249	-0.848	33.250	9.282	1.00	105.46	C
ATOM	3776	C	THR	A	249	1.457	34.842	8.633	1.00	100.86	C
ATOM	3777	O	THR	A	249	1.021	35.972	8.921	1.00	104.58	O
ATOM	3778	N	THR	A	250	2.463	34.262	9.304	1.00	96.81	N
ATOM	3780	CA	THR	A	250	3.064	34.893	10.490	1.00	95.38	C
ATOM	3782	CB	THR	A	250	3.973	33.896	11.305	1.00	91.35	C
ATOM	3784	OG1	THR	A	250	3.395	32.584	11.401	1.00	90.19	O
ATOM	3786	CG2	THR	A	250	4.032	34.315	12.723	1.00	91.91	C
ATOM	3790	C	THR	A	250	3.893	36.124	10.108	1.00	94.90	C
ATOM	3791	O	THR	A	250	4.075	37.028	10.936	1.00	96.04	O
ATOM	3792	N	TYR	A	251	4.380	36.156	8.861	1.00	93.34	N
ATOM	3794	CA	TYR	A	251	5.414	37.103	8.412	1.00	92.01	C
ATOM	3796	CB	TYR	A	251	4.905	38.559	8.423	1.00	95.71	C
ATOM	3799	CG	TYR	A	251	3.736	38.867	7.485	1.00	100.54	C
ATOM	3800	CD1	TYR	A	251	2.415	38.810	7.927	1.00	103.41	C
ATOM	3802	CE1	TYR	A	251	1.387	39.090	7.079	1.00	106.88	C
ATOM	3804	CZ	TYR	A	251	1.655	39.462	5.781	1.00	106.57	C
ATOM	3805	OH	TYR	A	251	0.633	39.762	4.918	1.00	110.34	O
ATOM	3807	CE2	TYR	A	251	2.937	39.552	5.333	1.00	102.86	C
ATOM	3809	CD2	TYR	A	251	3.962	39.262	6.165	1.00	100.61	C
ATOM	3811	C	TYR	A	251	6.699	36.995	9.259	1.00	88.23	C
ATOM	3812	O	TYR	A	251	7.362	37.985	9.536	1.00	88.44	O
ATOM	3813	N	GLN	A	252	7.059	35.806	9.697	1.00	84.91	N
ATOM	3815	CA	GLN	A	252	8.325	35.701	10.397	1.00	81.92	C
ATOM	3817	CB	GLN	A	252	8.134	36.158	11.840	1.00	82.92	C
ATOM	3820	CG	GLN	A	252	7.289	35.204	12.679	1.00	84.45	C
ATOM	3823	CD	GLN	A	252	6.830	35.822	13.980	1.00	88.01	C
ATOM	3824	OE1	GLN	A	252	7.570	36.606	14.587	1.00	89.53	O
ATOM	3825	NE2	GLN	A	252	5.603	35.504	14.406	1.00	89.99	N
ATOM	3828	C	GLN	A	252	8.961	34.304	10.327	1.00	78.33	C
ATOM	3829	O	GLN	A	252	8.474	33.408	9.676	1.00	76.85	O
ATOM	3830	N	MET	A	253	10.095	34.153	10.987	1.00	76.53	N
ATOM	3832	CA	MET	A	253	10.666	32.843	11.258	1.00	74.03	C
ATOM	3834	CB	MET	A	253	12.137	32.999	11.601	1.00	71.87	C
ATOM	3837	CG	MET	A	253	12.931	33.489	10.435	1.00	71.14	C
ATOM	3840	SD	MET	A	253	12.878	32.239	9.059	1.00	75.45	S
ATOM	3841	CE	MET	A	253	12.407	33.204	7.938	1.00	75.10	C
ATOM	3845	C	MET	A	253	9.874	32.178	12.387	1.00	75.06	C
ATOM	3846	O	MET	A	253	9.697	32.729	13.464	1.00	76.02	O
ATOM	3847	N	ASP	A	254	9.369	30.994	12.098	1.00	75.32	N
ATOM	3849	CA	ASP	A	254	8.560	30.212	13.023	1.00	76.65	C
ATOM	3851	CB	ASP	A	254	7.086	30.304	12.587	1.00	79.52	C
ATOM	3854	CG	ASP	A	254	6.174	30.884	13.663	1.00	82.89	C
ATOM	3855	OD1	ASP	A	254	6.563	30.843	14.866	1.00	82.32	O
ATOM	3856	OD2	ASP	A	254	5.037	31.370	13.376	1.00	86.13	O
ATOM	3857	C	ASP	A	254	9.022	28.724	13.021	1.00	74.63	C
ATOM	3858	O	ASP	A	254	9.382	28.192	11.985	1.00	73.66	O
ATOM	3859	N	VAL	A	255	8.988	28.059	14.174	1.00	74.49	N
ATOM	3861	CA	VAL	A	255	9.301	26.612	14.277	1.00	72.81	C
ATOM	3863	CB	VAL	A	255	8.787	25.976	15.627	1.00	73.73	C
ATOM	3865	CG1	VAL	A	255	9.722	24.890	16.070	1.00	72.16	C
ATOM	3869	CG2	VAL	A	255	8.622	27.020	16.785	1.00	76.62	C
ATOM	3873	C	VAL	A	255	8.707	25.762	13.148	1.00	72.23	C
ATOM	3874	O	VAL	A	255	7.497	25.708	12.977	1.00	73.53	O
ATOM	3875	N	ASN	A	256	9.566	25.088	12.389	1.00	70.27	N
ATOM	3877	CA	ASN	A	256	9.101	24.122	11.380	1.00	70.31	C
ATOM	3879	CB	ASN	A	256	10.182	23.791	10.348	1.00	67.62	C
ATOM	3882	CG	ASN	A	256	9.858	22.537	9.502	1.00	65.90	C
ATOM	3883	OD1	ASN	A	256	8.855	21.859	9.709	1.00	65.23	O
ATOM	3884	ND2	ASN	A	256	10.740	22.225	8.558	1.00	63.09	N
ATOM	3887	C	ASN	A	256	8.719	22.844	12.077	1.00	71.03	C
ATOM	3888	O	ASN	A	256	9.570	22.241	12.710	1.00	68.99	O
ATOM	3889	N	PRO	A	257	7.457	22.424	11.954	1.00	74.05	N

ATOM	3890	CA	PRO	A	257	7.007	21.212	12.660	1.00 74.85	C
ATOM	3892	CB	PRO	A	257	5.467	21.181	12.420	1.00 77.52	C
ATOM	3895	CG	PRO	A	257	5.247	21.916	11.101	1.00 78.04	C
ATOM	3898	CD	PRO	A	257	6.380	23.014	11.114	1.00 76.18	C
ATOM	3901	C	PRO	A	257	7.711	19.971	12.080	1.00 72.67	C
ATOM	3902	O	PRO	A	257	8.226	19.202	12.894	1.00 73.12	O
ATOM	3903	N	GLU	A	258	7.762	19.793	10.752	1.00 71.09	N
ATOM	3905	CA	GLU	A	258	8.441	18.626	10.148	1.00 68.98	C
ATOM	3907	CB	GLU	A	258	8.100	18.532	8.631	1.00 68.15	C
ATOM	3914	C	GLU	A	258	9.997	18.534	10.399	1.00 66.74	C
ATOM	3915	O	GLU	A	258	10.638	17.563	9.979	1.00 65.05	O
ATOM	3916	N	GLY	A	259	10.584	19.518	11.105	1.00 66.61	N
ATOM	3918	CA	GLY	A	259	12.031	19.749	11.122	1.00 64.31	C
ATOM	3921	C	GLY	A	259	12.826	18.787	11.970	1.00 63.46	C
ATOM	3922	O	GLY	A	259	12.237	18.134	12.863	1.00 64.80	O
ATOM	3923	N	LYS	A	260	14.148	18.732	11.713	1.00 61.22	N
ATOM	3925	CA	LYS	A	260	15.061	17.684	12.239	1.00 59.87	C
ATOM	3927	CB	LYS	A	260	15.012	16.435	11.361	1.00 58.96	C
ATOM	3930	CG	LYS	A	260	13.635	15.850	11.292	1.00 61.80	C
ATOM	3933	CD	LYS	A	260	13.592	14.414	10.821	1.00 63.51	C
ATOM	3936	CE	LYS	A	260	12.464	14.188	9.801	1.00 64.20	C
ATOM	3939	NZ	LYS	A	260	11.982	12.820	9.961	1.00 68.50	N
ATOM	3943	C	LYS	A	260	16.528	18.103	12.418	1.00 57.61	C
ATOM	3944	O	LYS	A	260	17.017	18.961	11.792	1.00 57.42	O
ATOM	3945	N	TYR	A	261	17.211	17.436	13.305	1.00 56.94	N
ATOM	3947	CA	TYR	A	261	18.543	17.762	13.716	1.00 55.87	C
ATOM	3949	CB	TYR	A	261	18.663	17.429	15.213	1.00 56.86	C
ATOM	3952	CG	TYR	A	261	17.714	18.203	16.097	1.00 58.81	C
ATOM	3953	CD1	TYR	A	261	16.747	17.586	16.878	1.00 62.63	C
ATOM	3955	CE1	TYR	A	261	15.864	18.338	17.722	1.00 63.21	C
ATOM	3957	CZ	TYR	A	261	15.972	19.694	17.733	1.00 64.10	C
ATOM	3958	OH	TYR	A	261	15.108	20.526	18.498	1.00 67.69	O
ATOM	3960	CE2	TYR	A	261	16.924	20.311	16.958	1.00 64.45	C
ATOM	3962	CD2	TYR	A	261	17.785	19.570	16.154	1.00 61.93	C
ATOM	3964	C	TYR	A	261	19.496	16.898	12.904	1.00 54.12	C
ATOM	3965	O	TYR	A	261	19.153	15.858	12.422	1.00 53.80	O
ATOM	3966	N	SER	A	262	20.729	17.298	12.811	1.00 53.84	N
ATOM	3968	CA	SER	A	262	21.669	16.598	12.024	1.00 53.32	C
ATOM	3970	CB	SER	A	262	22.452	17.594	11.178	1.00 52.59	C
ATOM	3973	OG	SER	A	262	23.775	17.761	11.661	1.00 53.41	O
ATOM	3975	C	SER	A	262	22.566	15.727	12.939	1.00 54.56	C
ATOM	3976	O	SER	A	262	23.248	16.220	13.815	1.00 55.50	O
ATOM	3977	N	PHE	A	263	22.561	14.423	12.719	1.00 55.44	N
ATOM	3979	CA	PHE	A	263	23.483	13.544	13.407	1.00 58.17	C
ATOM	3981	CB	PHE	A	263	22.733	12.590	14.327	1.00 59.86	C
ATOM	3984	CG	PHE	A	263	23.613	11.673	15.142	1.00 61.87	C
ATOM	3985	CD1	PHE	A	263	24.705	12.159	15.826	1.00 62.54	C
ATOM	3987	CE1	PHE	A	263	25.441	11.352	16.570	1.00 64.60	C
ATOM	3989	CZ	PHE	A	263	25.119	10.015	16.657	1.00 67.48	C
ATOM	3991	CE2	PHE	A	263	24.039	9.515	16.003	1.00 65.99	C
ATOM	3993	CD2	PHE	A	263	23.287	10.334	15.264	1.00 63.61	C
ATOM	3995	C	PHE	A	263	24.214	12.764	12.367	1.00 58.42	C
ATOM	3996	O	PHE	A	263	23.644	11.903	11.736	1.00 57.38	O
ATOM	3997	N	GLY	A	264	25.513	13.051	12.319	1.00 60.11	N
ATOM	3999	CA	GLY	A	264	26.439	12.853	11.228	1.00 59.81	C
ATOM	4002	C	GLY	A	264	25.990	12.114	10.022	1.00 58.59	C
ATOM	4003	O	GLY	A	264	26.208	10.919	9.926	1.00 61.26	O
ATOM	4004	N	ALA	A	265	25.426	12.803	9.068	1.00 56.84	N
ATOM	4006	CA	ALA	A	265	24.939	12.139	7.818	1.00 55.65	C
ATOM	4008	CB	ALA	A	265	25.948	11.151	7.134	1.00 55.54	C
ATOM	4012	C	ALA	A	265	23.642	11.468	8.026	1.00 54.37	C
ATOM	4013	O	ALA	A	265	23.287	10.620	7.246	1.00 54.14	O
ATOM	4014	N	THR	A	266	22.924	11.936	9.029	1.00 54.84	N
ATOM	4016	CA	THR	A	266	21.622	11.451	9.350	1.00 54.78	C
ATOM	4018	CB	THR	A	266	21.814	10.371	10.300	1.00 56.35	C
ATOM	4020	OG1	THR	A	266	21.628	9.203	9.556	1.00 55.31	O
ATOM	4022	CG2	THR	A	266	20.782	10.293	11.424	1.00 58.51	C
ATOM	4026	C	THR	A	266	20.750	12.549	9.891	1.00 55.45	C

ATOM	4027	O	THR	A	266	21.247	13.566	10.359	1.00	55.61	O
ATOM	4028	N	CYS	A	267	19.445	12.342	9.755	1.00	55.64	N
ATOM	4030	CA	CYS	A	267	18.432	13.347	10.049	1.00	56.01	C
ATOM	4032	CB	CYS	A	267	17.598	13.692	8.831	1.00	54.41	C
ATOM	4035	SG	CYS	A	267	18.513	14.786	7.754	1.00	52.64	S
ATOM	4036	C	CYS	A	267	17.547	12.698	11.016	1.00	57.94	C
ATOM	4037	O	CYS	A	267	17.059	11.627	10.716	1.00	58.45	O
ATOM	4038	N	VAL	A	268	17.273	13.378	12.130	1.00	59.39	N
ATOM	4040	CA	VAL	A	268	16.860	12.719	13.344	1.00	61.02	C
ATOM	4042	CB	VAL	A	268	18.164	12.290	14.042	1.00	61.46	C
ATOM	4044	CG1	VAL	A	268	18.230	12.613	15.536	1.00	61.61	C
ATOM	4048	CG2	VAL	A	268	18.399	10.822	13.748	1.00	62.00	C
ATOM	4052	C	VAL	A	268	16.000	13.647	14.197	1.00	62.66	C
ATOM	4053	O	VAL	A	268	16.450	14.752	14.458	1.00	62.80	O
ATOM	4054	N	LYS	A	269	14.799	13.212	14.646	1.00	63.83	N
ATOM	4056	CA	LYS	A	269	13.909	14.122	15.410	1.00	65.02	C
ATOM	4058	CB	LYS	A	269	12.413	13.700	15.399	1.00	65.91	C
ATOM	4061	C	LYS	A	269	14.398	14.338	16.842	1.00	65.84	C
ATOM	4066	O	LYS	A	269	14.126	15.373	17.438	1.00	65.90	O
ATOM	4067	N	LYS	A	270	15.099	13.359	17.404	1.00	66.46	N
ATOM	4069	CA	LYS	A	270	15.659	13.544	18.749	1.00	67.95	C
ATOM	4071	CB	LYS	A	270	14.794	12.868	19.835	1.00	68.78	C
ATOM	4078	C	LYS	A	270	17.118	13.048	18.735	1.00	67.52	C
ATOM	4079	O	LYS	A	270	17.418	12.037	18.093	1.00	67.82	O
ATOM	4080	N	CYS	A	271	18.029	13.792	19.378	1.00	67.18	N
ATOM	4082	CA	CYS	A	271	19.404	13.329	19.533	1.00	67.14	C
ATOM	4084	CB	CYS	A	271	20.298	14.392	20.163	1.00	67.37	C
ATOM	4087	SG	CYS	A	271	20.613	15.867	19.148	1.00	64.80	S
ATOM	4088	C	CYS	A	271	19.474	12.059	20.385	1.00	69.08	C
ATOM	4089	O	CYS	A	271	18.591	11.760	21.157	1.00	69.41	O
ATOM	4090	N	PRO	A	272	20.500	11.265	20.163	1.00	70.38	N
ATOM	4091	CA	PRO	A	272	20.849	10.151	21.051	1.00	72.24	C
ATOM	4093	CB	PRO	A	272	22.117	9.577	20.427	1.00	72.83	C
ATOM	4096	CG	PRO	A	272	22.339	10.261	19.105	1.00	71.30	C
ATOM	4099	CD	PRO	A	272	21.334	11.334	18.950	1.00	69.52	C
ATOM	4102	C	PRO	A	272	21.148	10.500	22.518	1.00	74.35	C
ATOM	4103	O	PRO	A	272	21.335	11.680	22.899	1.00	72.50	O
ATOM	4104	N	ALA	A	273	21.207	9.460	23.360	1.00	76.92	N
ATOM	4106	CA	ALA	A	273	21.336	9.770	24.770	1.00	79.31	C
ATOM	4108	CB	ALA	A	273	21.267	8.471	25.704	1.00	81.70	C
ATOM	4112	C	ALA	A	273	22.660	10.549	24.920	1.00	80.08	C
ATOM	4113	O	ALA	A	273	23.657	10.214	24.269	1.00	81.25	O
ATOM	4114	N	ALA	A	274	22.643	11.606	25.731	1.00	80.37	N
ATOM	4116	CA	ALA	A	274	23.873	12.309	26.180	1.00	80.79	C
ATOM	4118	CB	ALA	A	274	24.953	11.284	26.709	1.00	82.92	C
ATOM	4122	C	ALA	A	274	24.467	13.290	25.124	1.00	79.12	C
ATOM	4123	O	ALA	A	274	25.525	13.931	25.359	1.00	80.24	O
ATOM	4124	N	TYR	A	275	23.770	13.426	23.984	1.00	76.37	N
ATOM	4126	CA	TYR	A	275	24.059	14.488	23.006	1.00	73.46	C
ATOM	4128	CB	TYR	A	275	23.851	13.945	21.589	1.00	72.66	C
ATOM	4131	CG	TYR	A	275	24.943	13.029	21.067	1.00	73.61	C
ATOM	4132	CD1	TYR	A	275	24.814	11.666	21.160	1.00	75.81	C
ATOM	4134	CE1	TYR	A	275	25.821	10.768	20.623	1.00	78.82	C
ATOM	4136	CZ	TYR	A	275	26.949	11.265	19.972	1.00	77.14	C
ATOM	4137	OH	TYR	A	275	27.922	10.378	19.496	1.00	74.15	O
ATOM	4139	CE2	TYR	A	275	27.068	12.649	19.842	1.00	76.49	C
ATOM	4141	CD2	TYR	A	275	26.066	13.529	20.396	1.00	74.32	C
ATOM	4143	C	TYR	A	275	23.253	15.819	23.224	1.00	70.60	C
ATOM	4144	O	TYR	A	275	22.179	15.869	23.817	1.00	69.08	O
ATOM	4145	N	VAL	A	276	23.819	16.887	22.710	1.00	68.49	N
ATOM	4147	CA	VAL	A	276	23.309	18.203	22.896	1.00	66.88	C
ATOM	4149	CB	VAL	A	276	24.361	19.009	23.644	1.00	67.40	C
ATOM	4151	CG1	VAL	A	276	24.077	20.468	23.538	1.00	66.99	C
ATOM	4155	CG2	VAL	A	276	24.424	18.581	25.105	1.00	69.12	C
ATOM	4159	C	VAL	A	276	23.119	18.799	21.516	1.00	65.33	C
ATOM	4160	O	VAL	A	276	23.945	18.554	20.648	1.00	64.97	O
ATOM	4161	N	VAL	A	277	22.077	19.608	21.316	1.00	64.18	N
ATOM	4163	CA	VAL	A	277	21.895	20.312	20.051	1.00	63.43	C

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ATOM 4165  CB  VAL A 277      20.423  20.537  19.793  1.00 63.64           C
ATOM 4167  CG1 VAL A 277      20.178  21.579  18.660  1.00 63.81           C
ATOM 4171  CG2 VAL A 277      19.719  19.232  19.503  1.00 63.12           C
ATOM 4175  C   VAL A 277      22.591  21.672  20.042  1.00 63.46           C
ATOM 4176  O   VAL A 277      22.630  22.344  20.998  1.00 64.27           O
ATOM 4177  N   THR A 278      23.107  22.065  18.912  1.00 64.13           N
ATOM 4179  CA  THR A 278      23.883  23.273  18.716  1.00 65.38           C
ATOM 4181  CB  THR A 278      24.924  22.973  17.652  1.00 65.09           C
ATOM 4183  OG1 THR A 278      25.926  22.130  18.219  1.00 66.18           O
ATOM 4185  CG2 THR A 278      25.683  24.189  17.208  1.00 67.03           C
ATOM 4189  C   THR A 278      22.963  24.272  18.124  1.00 66.33           C
ATOM 4190  O   THR A 278      21.894  23.912  17.678  1.00 66.13           O
ATOM 4191  N   ASP A 279      23.387  25.530  18.075  1.00 68.38           N
ATOM 4193  CA  ASP A 279      22.622  26.565  17.371  1.00 69.35           C
ATOM 4195  CB  ASP A 279      23.231  27.974  17.663  1.00 70.17           C
ATOM 4198  CG  ASP A 279      22.622  28.619  18.927  1.00 74.12           C
ATOM 4199  OD1 ASP A 279      21.509  28.147  19.255  1.00 80.61           O
ATOM 4200  OD2 ASP A 279      23.129  29.541  19.668  1.00 75.22           O
ATOM 4201  C   ASP A 279      22.387  26.333  15.837  1.00 68.57           C
ATOM 4202  O   ASP A 279      21.493  26.966  15.271  1.00 69.77           O
ATOM 4203  N   HIS A 280      23.158  25.484  15.155  1.00 67.36           N
ATOM 4205  CA  HIS A 280      22.837  25.161  13.757  1.00 66.40           C
ATOM 4207  CB  HIS A 280      24.111  24.930  12.934  1.00 67.43           C
ATOM 4210  CG  HIS A 280      25.044  26.101  12.966  1.00 75.84           C
ATOM 4211  ND1 HIS A 280      24.803  27.271  12.246  1.00 83.72           N
ATOM 4213  CE1 HIS A 280      25.755  28.167  12.529  1.00 86.54           C
ATOM 4215  NE2 HIS A 280      26.613  27.618  13.393  1.00 86.77           N
ATOM 4217  CD2 HIS A 280      26.187  26.325  13.689  1.00 82.80           C
ATOM 4219  C   HIS A 280      21.928  23.935  13.660  1.00 63.82           C
ATOM 4220  O   HIS A 280      23.449  12.583  1.00 62.82           O
ATOM 4221  N   GLY A 281      21.454  23.433  14.786  1.00 62.07           N
ATOM 4223  CA  GLY A 281      20.711  22.192  14.803  1.00 60.37           C
ATOM 4226  C   GLY A 281      21.450  20.874  14.599  1.00 58.17           C
ATOM 4227  O   GLY A 281      20.872  19.957  14.053  1.00 54.70           O
ATOM 4228  N   SER A 282      22.674  20.769  15.099  1.00 58.36           N
ATOM 4230  CA  SER A 282      23.451  19.518  14.988  1.00 59.80           C
ATOM 4232  CB  SER A 282      24.823  19.766  14.377  1.00 59.16           C
ATOM 4235  OG  SER A 282      25.214  21.051  14.795  1.00 62.95           O
ATOM 4237  C   SER A 282      23.673  18.870  16.322  1.00 60.81           C
ATOM 4238  O   SER A 282      23.988  19.548  17.275  1.00 61.77           O
ATOM 4239  N   CYS A 283      23.563  17.547  16.351  1.00 61.19           N
ATOM 4241  CA  CYS A 283      23.886  16.751  17.517  1.00 62.86           C
ATOM 4243  CB  CYS A 283      23.288  15.378  17.378  1.00 62.70           C
ATOM 4246  SG  CYS A 283      21.524  15.593  17.275  1.00 63.42           S
ATOM 4247  C   CYS A 283      25.378  16.643  17.738  1.00 64.27           C
ATOM 4248  O   CYS A 283      26.086  15.979  17.042  1.00 64.51           O
ATOM 4249  N   VAL A 284      25.827  17.322  18.756  1.00 65.87           N
ATOM 4251  CA  VAL A 284      27.194  17.333  19.161  1.00 67.25           C
ATOM 4253  CB  VAL A 284      27.645  18.783  19.075  1.00 66.98           C
ATOM 4255  CG1 VAL A 284      28.287  19.308  20.427  1.00 69.20           C
ATOM 4259  CG2 VAL A 284      28.515  18.989  17.847  1.00 65.40           C
ATOM 4263  C   VAL A 284      27.288  16.742  20.591  1.00 69.52           C
ATOM 4264  O   VAL A 284      26.303  16.509  21.280  1.00 68.60           O
ATOM 4265  N   ARG A 285      28.494  16.492  21.043  1.00 72.61           N
ATOM 4267  CA  ARG A 285      28.679  15.718  22.271  1.00 75.24           C
ATOM 4269  CB  ARG A 285      30.043  15.046  22.222  1.00 77.38           C
ATOM 4272  CG  ARG A 285      30.241  14.309  20.879  1.00 77.58           C
ATOM 4275  CD  ARG A 285      31.506  13.520  20.741  1.00 79.64           C
ATOM 4278  NE  ARG A 285      31.750  12.663  21.889  1.00 81.81           N
ATOM 4280  CZ  ARG A 285      32.836  11.910  21.998  1.00 88.43           C
ATOM 4281  NH1 ARG A 285      33.742  11.916  21.013  1.00 89.46           N
ATOM 4284  NH2 ARG A 285      33.035  11.135  23.078  1.00 92.89           N
ATOM 4287  C   ARG A 285      28.524  16.617  23.501  1.00 75.88           C
ATOM 4288  O   ARG A 285      27.908  16.216  24.524  1.00 76.68           O
ATOM 4289  N   ALA A 286      29.080  17.833  23.386  1.00 75.41           N
ATOM 4291  CA  ALA A 286      29.095  18.805  24.477  1.00 74.95           C
ATOM 4293  CB  ALA A 286      30.314  18.614  25.312  1.00 77.22           C
ATOM 4297  C   ALA A 286      29.079  20.218  23.942  1.00 73.45           C
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ATOM	4298	O	ALA	A	286	29.676	20.530	22.894	1.00	72.96	O
ATOM	4299	N	CYS	A	287	28.406	21.073	24.681	1.00	72.05	N
ATOM	4301	CA	CYS	A	287	28.399	22.468	24.351	1.00	71.75	C
ATOM	4303	CB	CYS	A	287	27.642	23.229	25.427	1.00	71.31	C
ATOM	4306	SG	CYS	A	287	25.875	22.940	25.188	1.00	73.43	S
ATOM	4307	C	CYS	A	287	29.768	23.066	24.284	1.00	72.75	C
ATOM	4308	O	CYS	A	287	30.617	22.701	25.063	1.00	73.85	O
ATOM	4309	N	GLY	A	288	29.938	24.051	23.398	1.00	72.69	N
ATOM	4311	CA	GLY	A	288	31.088	24.947	23.428	1.00	74.02	C
ATOM	4314	C	GLY	A	288	31.303	25.704	24.750	1.00	75.81	C
ATOM	4315	O	GLY	A	288	30.500	25.659	25.739	1.00	76.26	O
ATOM	4316	N	ALA	A	289	32.440	26.388	24.813	1.00	77.00	N
ATOM	4318	CA	ALA	A	289	32.570	27.523	25.728	1.00	76.07	C
ATOM	4320	CB	ALA	A	289	34.065	27.885	25.926	1.00	78.28	C
ATOM	4324	C	ALA	A	289	31.802	28.638	25.003	1.00	73.43	C
ATOM	4325	O	ALA	A	289	31.441	28.499	23.823	1.00	72.51	O
ATOM	4326	N	GLU	A	290	31.556	29.741	25.680	1.00	71.93	N
ATOM	4328	CA	GLU	A	290	30.674	30.784	25.138	1.00	69.93	C
ATOM	4330	CB	GLU	A	290	30.933	31.060	23.638	1.00	69.55	C
ATOM	4337	C	GLU	A	290	29.204	30.388	25.378	1.00	68.43	C
ATOM	4338	O	GLU	A	290	28.304	31.263	25.434	1.00	66.42	O
ATOM	4339	N	SER	A	291	28.965	29.076	25.564	1.00	68.05	N
ATOM	4341	CA	SER	A	291	27.586	28.561	25.670	1.00	66.93	C
ATOM	4343	CB	SER	A	291	27.133	27.982	24.310	1.00	66.63	C
ATOM	4346	OG	SER	A	291	27.904	26.832	23.974	1.00	70.01	O
ATOM	4348	C	SER	A	291	27.418	27.540	26.790	1.00	65.49	C
ATOM	4349	O	SER	A	291	28.386	27.171	27.433	1.00	65.82	O
ATOM	4350	N	TYR	A	292	26.187	27.099	27.003	1.00	63.29	N
ATOM	4352	CA	TYR	A	292	25.873	26.244	28.114	1.00	63.59	C
ATOM	4354	CB	TYR	A	292	25.605	27.105	29.361	1.00	63.27	C
ATOM	4357	CG	TYR	A	292	24.345	27.900	29.346	1.00	61.34	C
ATOM	4358	CD1	TYR	A	292	23.232	27.426	29.953	1.00	61.28	C
ATOM	4360	CE1	TYR	A	292	22.064	28.124	29.961	1.00	62.43	C
ATOM	4362	CZ	TYR	A	292	21.969	29.333	29.317	1.00	63.33	C
ATOM	4363	OH	TYR	A	292	20.753	30.010	29.369	1.00	61.75	O
ATOM	4365	CE2	TYR	A	292	23.089	29.833	28.659	1.00	61.75	C
ATOM	4367	CD2	TYR	A	292	24.269	29.109	28.695	1.00	61.15	C
ATOM	4369	C	TYR	A	292	24.680	25.364	27.824	1.00	63.55	C
ATOM	4370	O	TYR	A	292	23.902	25.665	26.944	1.00	61.46	O
ATOM	4371	N	GLU	A	293	24.514	24.283	28.594	1.00	65.22	N
ATOM	4373	CA	GLU	A	293	23.421	23.337	28.343	1.00	64.96	C
ATOM	4375	CB	GLU	A	293	23.822	21.946	28.802	1.00	66.42	C
ATOM	4378	CG	GLU	A	293	22.814	20.850	28.461	1.00	66.78	C
ATOM	4381	CD	GLU	A	293	23.357	19.453	28.686	1.00	68.32	C
ATOM	4382	OE1	GLU	A	293	24.573	19.284	28.917	1.00	66.66	O
ATOM	4383	OE2	GLU	A	293	22.541	18.514	28.585	1.00	72.49	O
ATOM	4384	C	GLU	A	293	22.180	23.740	29.062	1.00	64.18	C
ATOM	4385	O	GLU	A	293	22.258	24.258	30.131	1.00	64.53	O
ATOM	4386	N	MET	A	294	21.037	23.444	28.482	1.00	64.06	N
ATOM	4388	CA	MET	A	294	19.735	23.773	29.048	1.00	64.77	C
ATOM	4390	CB	MET	A	294	19.444	25.230	28.817	1.00	64.63	C
ATOM	4393	CG	MET	A	294	19.548	25.564	27.386	1.00	65.21	C
ATOM	4396	SD	MET	A	294	18.161	26.233	26.768	1.00	67.82	S
ATOM	4397	CE	MET	A	294	18.225	27.967	27.430	1.00	68.39	C
ATOM	4401	C	MET	A	294	18.693	22.959	28.335	1.00	65.12	C
ATOM	4402	O	MET	A	294	19.053	22.135	27.553	1.00	66.70	O
ATOM	4403	N	GLU	A	295	17.409	23.178	28.560	1.00	66.08	N
ATOM	4405	CA	GLU	A	295	16.403	22.270	28.025	1.00	66.85	C
ATOM	4407	CB	GLU	A	295	16.105	21.144	29.030	1.00	68.03	C
ATOM	4410	CG	GLU	A	295	15.320	19.987	28.420	1.00	70.00	C
ATOM	4413	CD	GLU	A	295	15.183	18.715	29.276	1.00	72.37	C
ATOM	4414	OE1	GLU	A	295	15.186	18.767	30.490	1.00	69.76	O
ATOM	4415	OE2	GLU	A	295	15.049	17.605	28.700	1.00	77.58	O
ATOM	4416	C	GLU	A	295	15.120	22.957	27.586	1.00	67.10	C
ATOM	4417	O	GLU	A	295	14.683	23.903	28.155	1.00	66.08	O
ATOM	4418	N	GLU	A	296	14.521	22.402	26.557	1.00	68.39	N
ATOM	4420	CA	GLU	A	296	13.398	22.997	25.876	1.00	69.98	C
ATOM	4422	CB	GLU	A	296	13.906	24.045	24.880	1.00	69.31	C

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ATOM 4425  CG  GLU A 296      12.939  25.175  24.543  1.00 71.32           C
ATOM 4428  CD  GLU A 296      13.505  26.317  23.613  1.00 72.51           C
ATOM 4429  OE1 GLU A 296      14.592  26.270  22.931  1.00 67.50           O
ATOM 4430  OE2 GLU A 296      12.790  27.333  23.556  1.00 76.03           O
ATOM 4431  C   GLU A 296      12.649  21.830  25.194  1.00 71.02           C
ATOM 4432  O   GLU A 296      13.163  21.119  24.332  1.00 69.99           O
ATOM 4433  N   ASP A 297      11.435  21.621  25.654  1.00 72.87           N
ATOM 4435  CA  ASP A 297      10.564  20.526  25.225  1.00 74.19           C
ATOM 4437  CB  ASP A 297       9.775  20.856  23.925  1.00 74.54           C
ATOM 4440  CG  ASP A 297       8.253  20.479  24.078  1.00 78.91           C
ATOM 4441  OD1 ASP A 297       7.709  19.556  23.383  1.00 80.68           O
ATOM 4442  OD2 ASP A 297       7.528  21.033  24.964  1.00 83.36           O
ATOM 4443  C   ASP A 297      11.184  19.131  25.212  1.00 73.07           C
ATOM 4444  O   ASP A 297      10.949  18.325  24.330  1.00 72.94           O
ATOM 4445  N   GLY A 298      11.922  18.833  26.251  1.00 72.78           N
ATOM 4447  CA  GLY A 298      12.585  17.537  26.330  1.00 72.97           C
ATOM 4450  C   GLY A 298      13.754  17.408  25.377  1.00 71.57           C
ATOM 4451  O   GLY A 298      14.020  16.324  24.868  1.00 72.37           O
ATOM 4452  N   VAL A 299      14.432  18.524  25.111  1.00 70.39           N
ATOM 4454  CA  VAL A 299      15.601  18.557  24.223  1.00 68.75           C
ATOM 4456  CB  VAL A 299      15.264  19.209  22.862  1.00 68.23           C
ATOM 4458  CG1 VAL A 299      16.357  18.967  21.894  1.00 67.60           C
ATOM 4462  CG2 VAL A 299      13.917  18.716  22.298  1.00 68.94           C
ATOM 4466  C   VAL A 299      16.718  19.382  24.871  1.00 67.74           C
ATOM 4467  O   VAL A 299      16.573  20.574  25.068  1.00 66.87           O
ATOM 4468  N   ARG A 300      17.821  18.729  25.220  1.00 67.57           N
ATOM 4470  CA  ARG A 300      19.013  19.425  25.667  1.00 66.47           C
ATOM 4472  CB  ARG A 300      19.957  18.390  26.324  1.00 67.22           C
ATOM 4481  C   ARG A 300      19.626  20.231  24.437  1.00 64.86           C
ATOM 4482  O   ARG A 300      19.911  19.629  23.366  1.00 63.66           O
ATOM 4483  N   LYS A 301      19.757  21.576  24.594  1.00 63.56           N
ATOM 4485  CA  LYS A 301      20.400  22.506  23.623  1.00 62.09           C
ATOM 4487  CB  LYS A 301      19.365  23.446  23.014  1.00 61.81           C
ATOM 4490  CG  LYS A 301      18.004  22.874  22.945  1.00 62.27           C
ATOM 4493  CD  LYS A 301      17.127  23.599  21.987  1.00 62.22           C
ATOM 4496  CE  LYS A 301      15.767  22.883  21.889  1.00 64.18           C
ATOM 4499  NZ  LYS A 301      14.711  23.900  21.583  1.00 68.36           N
ATOM 4503  C   LYS A 301      21.474  23.415  24.208  1.00 61.40           C
ATOM 4504  O   LYS A 301      21.486  23.655  25.364  1.00 61.73           O
ATOM 4505  N   CYS A 302      22.354  23.943  23.380  1.00 60.84           N
ATOM 4507  CA  CYS A 302      23.324  24.956  23.768  1.00 61.35           C
ATOM 4509  CB  CYS A 302      24.550  24.881  22.905  1.00 60.99           C
ATOM 4512  SG  CYS A 302      25.368  23.314  23.146  1.00 67.99           S
ATOM 4513  C   CYS A 302      22.794  26.275  23.482  1.00 60.63           C
ATOM 4514  O   CYS A 302      22.523  26.536  22.363  1.00 62.04           O
ATOM 4515  N   ALA A 303      22.657  27.119  24.472  1.00 60.94           N
ATOM 4517  CA  ALA A 303      22.390  28.522  24.292  1.00 60.90           C
ATOM 4519  CB  ALA A 303      21.236  28.950  25.251  1.00 60.91           C
ATOM 4523  C   ALA A 303      23.723  29.290  24.565  1.00 61.01           C
ATOM 4524  O   ALA A 303      24.608  28.755  25.162  1.00 61.07           O
ATOM 4525  N   LYS A 304      23.867  30.532  24.114  1.00 61.74           N
ATOM 4527  CA  LYS A 304      25.101  31.306  24.314  1.00 62.76           C
ATOM 4529  CB  LYS A 304      25.383  32.328  23.177  1.00 62.14           C
ATOM 4536  C   LYS A 304      24.981  32.007  25.672  1.00 63.58           C
ATOM 4537  O   LYS A 304      23.927  32.573  26.016  1.00 62.97           O
ATOM 4538  N   CYS A 305      26.067  31.947  26.441  1.00 64.37           N
ATOM 4540  CA  CYS A 305      26.054  32.434  27.809  1.00 64.66           C
ATOM 4542  CB  CYS A 305      27.392  32.217  28.470  1.00 65.21           C
ATOM 4545  SG  CYS A 305      27.739  30.498  28.766  1.00 63.94           S
ATOM 4546  C   CYS A 305      25.781  33.878  27.864  1.00 64.83           C
ATOM 4547  O   CYS A 305      26.343  34.630  27.095  1.00 64.68           O
ATOM 4548  N   GLU A 306      24.936  34.253  28.814  1.00 66.05           N
ATOM 4550  CA  GLU A 306      24.524  35.644  29.001  1.00 66.80           C
ATOM 4552  CB  GLU A 306      23.563  35.751  30.202  1.00 66.67           C
ATOM 4559  C   GLU A 306      25.812  36.489  29.193  1.00 67.43           C
ATOM 4560  O   GLU A 306      26.353  37.052  28.177  1.00 68.24           O
ATOM 4561  N   GLY A 307      26.321  36.534  30.441  1.00 65.77           N
ATOM 4563  CA  GLY A 307      27.647  37.068  30.683  1.00 65.67           C
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ATOM	4566	C	GLY	A	307	28.789	36.058	30.514	1.00	65.77	C
ATOM	4567	O	GLY	A	307	28.749	35.218	29.655	1.00	66.29	O
ATOM	4568	N	PRO	A	308	29.826	36.129	31.345	1.00	65.73	N
ATOM	4569	CA	PRO	A	308	30.736	34.998	31.452	1.00	65.66	C
ATOM	4571	CB	PRO	A	308	31.671	35.399	32.609	1.00	66.34	C
ATOM	4574	CG	PRO	A	308	31.364	36.818	32.999	1.00	65.33	C
ATOM	4577	CD	PRO	A	308	30.197	37.256	32.246	1.00	65.52	C
ATOM	4580	C	PRO	A	308	29.978	33.708	31.807	1.00	64.49	C
ATOM	4581	O	PRO	A	308	29.013	33.700	32.535	1.00	63.44	O
ATOM	4582	N	CYS	A	309	30.438	32.594	31.299	1.00	64.85	N
ATOM	4584	CA	CYS	A	309	29.805	31.354	31.627	1.00	64.54	C
ATOM	4586	CB	CYS	A	309	30.386	30.212	30.830	1.00	65.21	C
ATOM	4589	SG	CYS	A	309	29.788	30.212	29.155	1.00	66.57	S
ATOM	4590	C	CYS	A	309	29.997	31.025	33.032	1.00	64.83	C
ATOM	4591	O	CYS	A	309	30.976	31.344	33.634	1.00	65.61	O
ATOM	4592	N	ARG	A	310	29.058	30.285	33.547	1.00	60.31	N
ATOM	4594	CA	ARG	A	310	29.113	29.882	34.923	1.00	57.41	C
ATOM	4596	CB	ARG	A	310	27.799	29.192	35.275	1.00	58.70	C
ATOM	4599	CG	ARG	A	310	27.864	28.223	36.449	1.00	59.00	C
ATOM	4602	CD	ARG	A	310	26.495	27.931	37.089	1.00	61.96	C
ATOM	4605	NE	ARG	A	310	26.526	28.291	38.498	1.00	59.13	N
ATOM	4607	CZ	ARG	A	310	26.658	27.437	39.485	1.00	58.19	C
ATOM	4608	NH1	ARG	A	310	26.733	26.108	39.288	1.00	62.56	N
ATOM	4611	NH2	ARG	A	310	26.687	27.939	40.688	1.00	54.22	N
ATOM	4614	C	ARG	A	310	30.266	28.956	35.092	1.00	56.38	C
ATOM	4615	O	ARG	A	310	30.384	27.970	34.367	1.00	60.06	O
ATOM	4616	N	LYS	A	311	31.077	29.253	36.067	1.00	52.95	N
ATOM	4618	CA	LYS	A	311	32.237	28.466	36.405	1.00	53.16	C
ATOM	4620	CB	LYS	A	311	33.489	29.100	35.809	1.00	53.22	C
ATOM	4623	CG	LYS	A	311	34.691	28.195	35.636	1.00	54.72	C
ATOM	4626	CD	LYS	A	311	35.994	28.877	36.020	1.00	54.84	C
ATOM	4629	CE	LYS	A	311	37.190	28.137	35.562	1.00	55.94	C
ATOM	4632	NZ	LYS	A	311	37.492	28.559	34.153	1.00	61.52	N
ATOM	4636	C	LYS	A	311	32.370	28.399	37.919	1.00	51.04	C
ATOM	4637	O	LYS	A	311	32.461	29.412	38.626	1.00	48.96	O
ATOM	4638	N	VAL	A	312	32.389	27.190	38.441	1.00	52.10	N
ATOM	4640	CA	VAL	A	312	32.387	27.022	39.879	1.00	49.43	C
ATOM	4642	CB	VAL	A	312	31.419	25.856	40.214	1.00	51.43	C
ATOM	4644	CG1	VAL	A	312	31.644	25.299	41.629	1.00	51.31	C
ATOM	4648	CG2	VAL	A	312	29.941	26.303	40.019	1.00	51.87	C
ATOM	4652	C	VAL	A	312	33.810	26.792	40.321	1.00	47.46	C
ATOM	4653	O	VAL	A	312	34.534	26.134	39.633	1.00	48.81	O
ATOM	4654	N	CYS	A	313	34.224	27.342	41.452	1.00	45.64	N
ATOM	4656	CA	CYS	A	313	35.603	27.139	41.985	1.00	46.21	C
ATOM	4658	CB	CYS	A	313	36.533	28.305	41.639	1.00	45.10	C
ATOM	4661	SG	CYS	A	313	36.511	28.703	39.843	1.00	55.46	S
ATOM	4662	C	CYS	A	313	35.674	26.972	43.482	1.00	44.15	C
ATOM	4663	O	CYS	A	313	35.043	27.684	44.222	1.00	44.97	O
ATOM	4664	N	ASN	A	314	36.502	26.078	43.951	1.00	44.46	N
ATOM	4666	CA	ASN	A	314	36.817	25.995	45.346	1.00	42.36	C
ATOM	4668	CB	ASN	A	314	37.915	24.968	45.553	1.00	43.90	C
ATOM	4671	CG	ASN	A	314	37.515	23.563	45.052	1.00	46.81	C
ATOM	4672	OD1	ASN	A	314	36.465	23.016	45.453	1.00	50.58	O
ATOM	4673	ND2	ASN	A	314	38.309	23.026	44.099	1.00	49.45	N
ATOM	4676	C	ASN	A	314	37.278	27.306	45.972	1.00	40.41	C
ATOM	4677	O	ASN	A	314	37.974	28.140	45.385	1.00	40.47	O
ATOM	4678	N	GLY	A	315	36.860	27.494	47.209	1.00	39.42	N
ATOM	4680	CA	GLY	A	315	37.329	28.597	47.998	1.00	36.84	C
ATOM	4683	C	GLY	A	315	38.633	28.342	48.697	1.00	36.39	C
ATOM	4684	O	GLY	A	315	39.321	27.340	48.580	1.00	36.34	O
ATOM	4685	N	ILE	A	316	38.975	29.319	49.483	1.00	35.62	N
ATOM	4687	CA	ILE	A	316	40.197	29.200	50.208	1.00	36.69	C
ATOM	4689	CB	ILE	A	316	40.615	30.542	50.613	1.00	34.84	C
ATOM	4691	CG1	ILE	A	316	41.327	31.048	49.383	1.00	37.92	C
ATOM	4694	CD1	ILE	A	316	41.400	32.434	49.319	1.00	40.69	C
ATOM	4698	CG2	ILE	A	316	41.647	30.485	51.734	1.00	34.92	C
ATOM	4702	C	ILE	A	316	40.093	28.246	51.344	1.00	37.13	C
ATOM	4703	O	ILE	A	316	39.246	28.398	52.197	1.00	36.17	O

ATOM	4704	N	GLY	A	317	40.969	27.271	51.351	1.00	38.50	N
ATOM	4706	CA	GLY	A	317	40.937	26.289	52.410	1.00	40.78	C
ATOM	4709	C	GLY	A	317	40.864	24.924	51.786	1.00	43.80	C
ATOM	4710	O	GLY	A	317	41.628	23.995	52.149	1.00	46.54	O
ATOM	4711	N	ILE	A	318	40.026	24.860	50.760	1.00	43.85	N
ATOM	4713	CA	ILE	A	318	39.762	23.645	49.983	1.00	46.17	C
ATOM	4715	CB	ILE	A	318	38.287	23.658	49.611	1.00	45.60	C
ATOM	4717	CG1	ILE	A	318	37.441	23.639	50.888	1.00	43.98	C
ATOM	4720	CD1	ILE	A	318	36.125	24.137	50.662	1.00	43.89	C
ATOM	4724	CG2	ILE	A	318	38.020	22.487	48.661	1.00	47.89	C
ATOM	4728	C	ILE	A	318	40.520	23.509	48.639	1.00	47.63	C
ATOM	4729	O	ILE	A	318	40.833	24.543	48.012	1.00	46.75	O
ATOM	4730	N	GLY	A	319	40.735	22.254	48.176	1.00	49.13	N
ATOM	4732	CA	GLY	A	319	41.097	21.976	46.806	1.00	49.93	C
ATOM	4735	C	GLY	A	319	42.480	22.498	46.473	1.00	50.82	C
ATOM	4736	O	GLY	A	319	43.460	22.255	47.179	1.00	50.60	O
ATOM	4737	N	GLU	A	320	42.574	23.195	45.349	1.00	51.94	N
ATOM	4739	CA	GLU	A	320	43.811	23.859	44.916	1.00	52.89	C
ATOM	4741	CB	GLU	A	320	43.504	24.771	43.735	1.00	53.88	C
ATOM	4744	CG	GLU	A	320	42.802	24.123	42.555	1.00	59.54	C
ATOM	4747	CD	GLU	A	320	41.252	24.262	42.562	1.00	63.07	C
ATOM	4748	OE1	GLU	A	320	40.603	24.715	43.485	1.00	57.30	O
ATOM	4749	OE2	GLU	A	320	40.630	23.836	41.573	1.00	75.97	O
ATOM	4750	C	GLU	A	320	44.342	24.781	46.010	1.00	50.87	C
ATOM	4751	O	GLU	A	320	45.521	25.097	46.022	1.00	52.50	O
ATOM	4752	N	TYR	A	321	43.445	25.243	46.893	1.00	47.74	N
ATOM	4754	CA	TYR	A	321	43.796	25.996	48.048	1.00	45.39	C
ATOM	4756	CB	TYR	A	321	42.903	27.163	48.113	1.00	43.88	C
ATOM	4759	CG	TYR	A	321	42.549	27.735	46.790	1.00	47.78	C
ATOM	4760	CD1	TYR	A	321	41.299	27.545	46.250	1.00	51.91	C
ATOM	4762	CE1	TYR	A	321	40.963	28.042	45.044	1.00	54.97	C
ATOM	4764	CZ	TYR	A	321	41.861	28.800	44.366	1.00	58.00	C
ATOM	4765	OH	TYR	A	321	41.452	29.315	43.136	1.00	61.65	O
ATOM	4767	CE2	TYR	A	321	43.129	29.019	44.881	1.00	55.75	C
ATOM	4769	CD2	TYR	A	321	43.461	28.453	46.077	1.00	54.38	C
ATOM	4771	C	TYR	A	321	43.715	25.308	49.398	1.00	45.37	C
ATOM	4772	O	TYR	A	321	43.438	25.950	50.371	1.00	42.50	O
ATOM	4773	N	LYS	A	322	44.043	24.018	49.489	1.00	49.57	N
ATOM	4775	CA	LYS	A	322	44.267	23.354	50.814	1.00	50.70	C
ATOM	4777	CB	LYS	A	322	44.619	21.795	50.737	1.00	52.77	C
ATOM	4780	C	LYS	A	322	45.388	24.199	51.513	1.00	49.99	C
ATOM	4785	O	LYS	A	322	46.427	24.525	50.921	1.00	51.02	O
ATOM	4786	N	ASP	A	323	45.144	24.600	52.746	1.00	48.30	N
ATOM	4788	CA	ASP	A	323	46.253	25.036	53.583	1.00	47.80	C
ATOM	4790	CB	ASP	A	323	47.442	24.075	53.481	1.00	51.14	C
ATOM	4793	CG	ASP	A	323	47.180	22.729	54.109	1.00	53.64	C
ATOM	4794	OD1	ASP	A	323	46.376	22.621	55.075	1.00	52.75	O
ATOM	4795	OD2	ASP	A	323	47.796	21.713	53.701	1.00	58.75	O
ATOM	4796	C	ASP	A	323	46.770	26.367	53.240	1.00	45.65	C
ATOM	4797	O	ASP	A	323	47.821	26.714	53.723	1.00	47.47	O
ATOM	4798	N	SER	A	324	46.044	27.125	52.438	1.00	43.32	N
ATOM	4800	CA	SER	A	324	46.390	28.510	52.161	1.00	41.79	C
ATOM	4802	CB	SER	A	324	46.201	28.796	50.677	1.00	42.47	C
ATOM	4805	OG	SER	A	324	45.674	27.663	50.062	1.00	45.77	O
ATOM	4807	C	SER	A	324	45.537	29.476	52.905	1.00	37.75	C
ATOM	4808	O	SER	A	324	44.411	29.412	52.773	1.00	37.31	O
ATOM	4809	N	LEU	A	325	46.096	30.432	53.610	1.00	37.13	N
ATOM	4811	CA	LEU	A	325	45.334	31.298	54.493	1.00	35.04	C
ATOM	4813	CB	LEU	A	325	46.238	32.059	55.405	1.00	35.20	C
ATOM	4816	CG	LEU	A	325	47.124	31.230	56.304	1.00	38.21	C
ATOM	4818	CD1	LEU	A	325	48.006	32.088	57.155	1.00	38.14	C
ATOM	4822	CD2	LEU	A	325	46.216	30.335	57.130	1.00	38.92	C
ATOM	4826	C	LEU	A	325	44.533	32.325	53.776	1.00	33.99	C
ATOM	4827	O	LEU	A	325	43.445	32.619	54.178	1.00	32.49	O
ATOM	4828	N	SER	A	326	45.048	32.884	52.693	1.00	35.06	N
ATOM	4830	CA	SER	A	326	44.248	33.883	51.961	1.00	32.80	C
ATOM	4832	CB	SER	A	326	44.583	35.203	52.587	1.00	31.79	C
ATOM	4835	OG	SER	A	326	44.971	36.156	51.666	1.00	32.01	O

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ATOM 4837  C   SER A 326      44.404  33.929  50.432  1.00 33.06           C
ATOM 4838  O   SER A 326      45.192  33.247  49.857  1.00 33.84           O
ATOM 4839  N   ILE A 327      43.595  34.725  49.773  1.00 32.82           N
ATOM 4841  CA  ILE A 327      43.767  34.943  48.360  1.00 34.47           C
ATOM 4843  CB  ILE A 327      42.689  35.862  47.848  1.00 34.82           C
ATOM 4845  CG1 ILE A 327      41.498  35.102  47.344  1.00 36.75           C
ATOM 4848  CD1 ILE A 327      40.210  35.936  47.450  1.00 39.37           C
ATOM 4852  CG2 ILE A 327      43.072  36.537  46.591  1.00 38.67           C
ATOM 4856  C   ILE A 327      45.050  35.640  48.320  1.00 34.57           C
ATOM 4857  O   ILE A 327      45.288  36.446  49.182  1.00 34.42           O
ATOM 4858  N   ASN A 328      45.886  35.347  47.332  1.00 36.41           N
ATOM 4860  CA  ASN A 328      47.298  35.754  47.372  1.00 37.37           C
ATOM 4862  CB  ASN A 328      48.002  35.038  48.522  1.00 37.48           C
ATOM 4865  CG  ASN A 328      48.542  33.692  48.173  1.00 39.49           C
ATOM 4866  OD1 ASN A 328      49.033  33.448  47.064  1.00 46.88           O
ATOM 4867  ND2 ASN A 328      48.542  32.803  49.165  1.00 39.97           N
ATOM 4870  C   ASN A 328      48.051  35.653  46.050  1.00 39.52           C
ATOM 4871  O   ASN A 328      47.569  35.036  45.117  1.00 40.76           O
ATOM 4872  N   ALA A 329      49.204  36.297  45.922  1.00 41.21           N
ATOM 4874  CA  ALA A 329      49.894  36.340  44.585  1.00 44.38           C
ATOM 4876  CB  ALA A 329      51.307  36.867  44.702  1.00 46.80           C
ATOM 4880  C   ALA A 329      49.981  35.028  43.836  1.00 45.40           C
ATOM 4881  O   ALA A 329      49.799  34.986  42.642  1.00 45.54           O
ATOM 4882  N   THR A 330      50.308  33.986  44.577  1.00 45.70           N
ATOM 4884  CA  THR A 330      50.416  32.677  44.025  1.00 48.70           C
ATOM 4886  CB  THR A 330      50.997  31.669  45.089  1.00 49.87           C
ATOM 4888  OG1 THR A 330      52.331  32.048  45.543  1.00 51.51           O
ATOM 4890  CG2 THR A 330      51.204  30.298  44.458  1.00 50.43           C
ATOM 4894  C   THR A 330      49.057  32.212  43.479  1.00 47.89           C
ATOM 4895  O   THR A 330      48.914  31.950  42.295  1.00 51.27           O
ATOM 4896  N   ASN A 331      48.053  32.168  44.321  1.00 44.82           N
ATOM 4898  CA  ASN A 331      46.806  31.518  43.978  1.00 43.96           C
ATOM 4900  CB  ASN A 331      46.163  30.942  45.241  1.00 41.18           C
ATOM 4903  CG  ASN A 331      45.825  32.001  46.294  1.00 38.02           C
ATOM 4904  OD1 ASN A 331      45.247  33.040  46.021  1.00 35.91           O
ATOM 4905  ND2 ASN A 331      46.133  31.684  47.528  1.00 38.74           N
ATOM 4908  C   ASN A 331      45.750  32.358  43.246  1.00 44.04           C
ATOM 4909  O   ASN A 331      44.746  31.828  42.838  1.00 43.86           O
ATOM 4910  N   ILE A 332      45.930  33.662  43.099  1.00 43.98           N
ATOM 4912  CA  ILE A 332      44.823  34.466  42.632  1.00 42.84           C
ATOM 4914  CB  ILE A 332      45.329  35.929  42.836  1.00 42.58           C
ATOM 4916  CG1 ILE A 332      44.037  36.797  42.283  1.00 44.23           C
ATOM 4919  CD1 ILE A 332      43.052  37.052  43.195  1.00 43.72           C
ATOM 4923  CG2 ILE A 332      46.249  36.384  42.012  1.00 47.11           C
ATOM 4927  C   ILE A 332      44.578  34.128  41.178  1.00 45.50           C
ATOM 4928  O   ILE A 332      43.489  34.240  40.691  1.00 45.59           O
ATOM 4929  N   LYS A 333      45.597  33.700  40.442  1.00 49.20           N
ATOM 4931  CA  LYS A 333      45.375  33.357  39.021  1.00 51.11           C
ATOM 4933  CB  LYS A 333      46.690  33.013  38.339  1.00 54.36           C
ATOM 4936  CG  LYS A 333      47.406  31.694  38.725  1.00 57.01           C
ATOM 4939  CD  LYS A 333      48.821  31.590  37.959  1.00 62.54           C
ATOM 4942  CE  LYS A 333      49.910  30.629  38.656  1.00 65.67           C
ATOM 4945  NZ  LYS A 333      50.727  29.668  37.638  1.00 68.40           N
ATOM 4949  C   LYS A 333      44.323  32.280  38.822  1.00 50.34           C
ATOM 4950  O   LYS A 333      43.582  32.338  37.868  1.00 51.26           O
ATOM 4952  N   HIS A 334      44.258  31.317  39.738  1.00 49.08           N
ATOM 4953  CA  HIS A 334      43.312  30.206  39.685  1.00 49.27           C
ATOM 4955  CB  HIS A 334      43.659  29.165  40.744  1.00 48.44           C
ATOM 4958  CG  HIS A 334      44.980  28.524  40.539  1.00 53.18           C
ATOM 4959  ND1 HIS A 334      45.158  27.442  39.698  1.00 59.88           N
ATOM 4961  CE1 HIS A 334      46.441  27.119  39.674  1.00 62.27           C
ATOM 4963  NE2 HIS A 334      47.095  27.941  40.481  1.00 59.52           N
ATOM 4965  CD2 HIS A 334      46.199  28.819  41.045  1.00 54.75           C
ATOM 4967  C   HIS A 334      41.853  30.601  39.909  1.00 47.75           C
ATOM 4968  O   HIS A 334      40.986  29.750  39.847  1.00 48.67           O
ATOM 4969  N   PHE A 335      41.579  31.874  40.217  1.00 46.14           N
ATOM 4971  CA  PHE A 335      40.196  32.413  40.254  1.00 44.55           C
ATOM 4973  CB  PHE A 335      40.053  33.427  41.378  1.00 41.24           C
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ATOM	4976	CG	PHE	A	335	40.055	32.827	42.681	1.00	39.32	C
ATOM	4977	CD1	PHE	A	335	41.223	32.551	43.307	1.00	39.57	C
ATOM	4979	CE1	PHE	A	335	41.222	31.936	44.525	1.00	40.84	C
ATOM	4981	CZ	PHE	A	335	40.043	31.617	45.104	1.00	41.14	C
ATOM	4983	CE2	PHE	A	335	38.863	31.842	44.455	1.00	40.09	C
ATOM	4985	CD2	PHE	A	335	38.876	32.428	43.255	1.00	40.14	C
ATOM	4987	C	PHE	A	335	39.687	33.101	38.960	1.00	46.58	C
ATOM	4988	O	PHE	A	335	38.620	33.706	39.041	1.00	45.62	O
ATOM	4989	N	LYS	A	336	40.399	32.984	37.819	1.00	48.98	N
ATOM	4991	CA	LYS	A	336	40.046	33.678	36.590	1.00	51.49	C
ATOM	4993	CB	LYS	A	336	41.121	33.576	35.481	1.00	53.28	C
ATOM	5000	C	LYS	A	336	38.721	33.111	36.086	1.00	53.24	C
ATOM	5001	O	LYS	A	336	38.578	31.885	35.942	1.00	55.91	O
ATOM	5002	N	ASN	A	337	37.749	33.990	35.837	1.00	52.95	N
ATOM	5004	CA	ASN	A	337	36.461	33.566	35.321	1.00	54.28	C
ATOM	5006	CB	ASN	A	337	36.652	32.725	34.105	1.00	57.90	C
ATOM	5009	CG	ASN	A	337	37.513	33.373	33.127	1.00	61.13	C
ATOM	5010	OD1	ASN	A	337	37.278	34.525	32.791	1.00	60.64	O
ATOM	5011	ND2	ASN	A	337	38.553	32.662	32.664	1.00	67.20	N
ATOM	5014	C	ASN	A	337	35.581	32.785	36.259	1.00	52.45	C
ATOM	5015	O	ASN	A	337	34.540	32.290	35.832	1.00	52.89	O
ATOM	5016	N	CYS	A	338	35.970	32.691	37.527	1.00	49.80	N
ATOM	5018	CA	CYS	A	338	35.126	32.034	38.473	1.00	49.56	C
ATOM	5020	CB	CYS	A	338	35.803	31.803	39.799	1.00	47.52	C
ATOM	5023	SG	CYS	A	338	37.211	30.611	39.508	1.00	59.20	S
ATOM	5024	C	CYS	A	338	33.979	32.932	38.628	1.00	47.35	C
ATOM	5025	O	CYS	A	338	34.130	34.149	38.726	1.00	46.23	O
ATOM	5026	N	THR	A	339	32.834	32.301	38.627	1.00	46.93	N
ATOM	5028	CA	THR	A	339	31.599	32.968	38.809	1.00	47.23	C
ATOM	5030	CB	THR	A	339	30.770	32.593	37.622	1.00	50.51	C
ATOM	5032	OG1	THR	A	339	30.642	33.782	36.857	1.00	53.34	O
ATOM	5034	CG2	THR	A	339	29.337	32.064	37.962	1.00	50.61	C
ATOM	5038	C	THR	A	339	30.930	32.648	40.135	1.00	45.18	C
ATOM	5039	O	THR	A	339	30.247	33.470	40.689	1.00	44.47	O
ATOM	5040	N	SER	A	340	31.129	31.439	40.632	1.00	45.15	N
ATOM	5042	CA	SER	A	340	30.623	31.025	41.933	1.00	43.31	C
ATOM	5044	CB	SER	A	340	29.379	30.132	41.733	1.00	45.83	C
ATOM	5047	OG	SER	A	340	29.249	29.081	42.698	1.00	44.04	O
ATOM	5049	C	SER	A	340	31.702	30.248	42.678	1.00	41.72	C
ATOM	5050	O	SER	A	340	32.335	29.358	42.130	1.00	43.56	O
ATOM	5051	N	ILE	A	341	31.840	30.554	43.938	1.00	38.97	N
ATOM	5053	CA	ILE	A	341	32.891	30.013	44.722	1.00	38.11	C
ATOM	5055	CB	ILE	A	341	33.577	31.124	45.410	1.00	36.26	C
ATOM	5057	CG1	ILE	A	341	34.447	31.785	44.365	1.00	37.48	C
ATOM	5060	CD1	ILE	A	341	34.986	32.997	44.783	1.00	39.65	C
ATOM	5064	CG2	ILE	A	341	34.370	30.578	46.573	1.00	36.38	C
ATOM	5068	C	ILE	A	341	32.279	29.147	45.704	1.00	38.22	C
ATOM	5069	O	ILE	A	341	31.424	29.588	46.497	1.00	36.50	O
ATOM	5070	N	SER	A	342	32.702	27.897	45.679	1.00	40.02	N
ATOM	5072	CA	SER	A	342	32.138	26.946	46.612	1.00	41.56	C
ATOM	5074	CB	SER	A	342	31.753	25.639	45.909	1.00	44.24	C
ATOM	5077	OG	SER	A	342	32.513	24.550	46.357	1.00	49.61	O
ATOM	5079	C	SER	A	342	33.114	26.871	47.782	1.00	39.51	C
ATOM	5080	O	SER	A	342	34.143	26.269	47.719	1.00	40.40	O
ATOM	5081	N	GLY	A	343	32.762	27.578	48.840	1.00	38.27	N
ATOM	5083	CA	GLY	A	343	33.645	27.834	49.938	1.00	37.00	C
ATOM	5086	C	GLY	A	343	33.681	29.322	50.263	1.00	35.53	C
ATOM	5087	O	GLY	A	343	32.754	30.074	49.877	1.00	34.59	O
ATOM	5088	N	ASP	A	344	34.775	29.727	50.970	1.00	34.54	N
ATOM	5090	CA	ASP	A	344	34.920	31.070	51.544	1.00	32.00	C
ATOM	5092	CB	ASP	A	344	35.234	30.977	53.032	1.00	31.72	C
ATOM	5095	CG	ASP	A	344	34.574	29.830	53.703	1.00	34.32	C
ATOM	5096	OD1	ASP	A	344	33.317	29.772	53.622	1.00	41.66	O
ATOM	5097	OD2	ASP	A	344	35.178	28.928	54.346	1.00	35.55	O
ATOM	5098	C	ASP	A	344	36.025	31.826	50.797	1.00	30.48	C
ATOM	5099	O	ASP	A	344	36.853	31.209	50.204	1.00	31.17	O
ATOM	5100	N	LEU	A	345	35.995	33.146	50.824	1.00	28.65	N
ATOM	5102	CA	LEU	A	345	37.056	33.969	50.344	1.00	29.65	C

ATOM	5104	CB	LEU	A	345	36.479	34.951	49.381	1.00	31.28	C
ATOM	5107	CG	LEU	A	345	36.877	35.111	47.916	1.00	34.49	C
ATOM	5109	CD1	LEU	A	345	37.260	33.825	47.393	1.00	39.14	C
ATOM	5113	CD2	LEU	A	345	35.690	35.571	47.155	1.00	33.77	C
ATOM	5117	C	LEU	A	345	37.580	34.737	51.548	1.00	29.18	C
ATOM	5118	O	LEU	A	345	36.784	35.296	52.295	1.00	29.37	O
ATOM	5119	N	HIS	A	346	38.882	34.655	51.810	1.00	29.00	N
ATOM	5121	CA	HIS	A	346	39.552	35.409	52.838	1.00	28.13	C
ATOM	5123	CB	HIS	A	346	40.486	34.542	53.655	1.00	29.47	C
ATOM	5126	CG	HIS	A	346	39.875	33.338	54.278	1.00	30.10	C
ATOM	5127	ND1	HIS	A	346	38.833	33.396	55.118	1.00	35.14	N
ATOM	5129	CE1	HIS	A	346	38.538	32.196	55.572	1.00	35.47	C
ATOM	5131	NE2	HIS	A	346	39.391	31.361	55.089	1.00	32.97	N
ATOM	5133	CD2	HIS	A	346	40.268	32.060	54.311	1.00	36.36	C
ATOM	5135	C	HIS	A	346	40.552	36.345	52.173	1.00	29.15	C
ATOM	5136	O	HIS	A	346	41.448	35.896	51.405	1.00	29.88	O
ATOM	5137	N	ILE	A	347	40.509	37.629	52.497	1.00	28.56	N
ATOM	5139	CA	ILE	A	347	41.537	38.505	52.005	1.00	28.80	C
ATOM	5141	CB	ILE	A	347	40.914	39.548	51.175	1.00	28.20	C
ATOM	5143	CG1	ILE	A	347	40.355	38.876	49.939	1.00	28.97	C
ATOM	5146	CD1	ILE	A	347	39.286	39.729	49.225	1.00	31.16	C
ATOM	5150	CG2	ILE	A	347	41.951	40.589	50.781	1.00	29.70	C
ATOM	5154	C	ILE	A	347	42.248	39.072	53.183	1.00	28.89	C
ATOM	5155	O	ILE	A	347	41.697	39.924	53.810	1.00	29.99	O
ATOM	5156	N	LEU	A	348	43.443	38.605	53.524	1.00	30.00	N
ATOM	5158	CA	LEU	A	348	44.077	39.025	54.787	1.00	30.57	C
ATOM	5160	CB	LEU	A	348	44.555	37.886	55.605	1.00	30.53	C
ATOM	5163	CG	LEU	A	348	43.596	36.715	55.576	1.00	31.50	C
ATOM	5165	CD1	LEU	A	348	44.246	35.482	56.211	1.00	32.92	C
ATOM	5169	CD2	LEU	A	348	42.336	37.083	56.215	1.00	31.99	C
ATOM	5173	C	LEU	A	348	45.246	39.881	54.475	1.00	32.43	C
ATOM	5174	O	LEU	A	348	45.607	39.970	53.337	1.00	34.49	O
ATOM	5175	N	PRO	A	349	45.778	40.592	55.455	1.00	32.87	N
ATOM	5176	CA	PRO	A	349	46.973	41.381	55.264	1.00	33.99	C
ATOM	5178	CB	PRO	A	349	47.271	41.886	56.659	1.00	34.22	C
ATOM	5181	CG	PRO	A	349	45.966	42.137	57.153	1.00	34.18	C
ATOM	5184	CD	PRO	A	349	45.163	40.881	56.755	1.00	32.82	C
ATOM	5187	C	PRO	A	349	48.124	40.614	54.726	1.00	35.54	C
ATOM	5188	O	PRO	A	349	48.893	41.228	53.933	1.00	37.23	O
ATOM	5189	N	VAL	A	350	48.299	39.356	55.124	1.00	35.44	N
ATOM	5191	CA	VAL	A	350	49.450	38.608	54.559	1.00	37.52	C
ATOM	5193	CB	VAL	A	350	49.454	37.117	54.856	1.00	37.63	C
ATOM	5195	CG1	VAL	A	350	50.325	36.871	55.983	1.00	39.53	C
ATOM	5199	CG2	VAL	A	350	48.030	36.560	55.008	1.00	35.14	C
ATOM	5203	C	VAL	A	350	49.551	38.672	53.016	1.00	37.28	C
ATOM	5204	O	VAL	A	350	50.644	38.668	52.452	1.00	37.00	O
ATOM	5205	N	ALA	A	351	48.386	38.692	52.387	1.00	34.61	N
ATOM	5207	CA	ALA	A	351	48.304	38.858	50.982	1.00	35.88	C
ATOM	5209	CB	ALA	A	351	46.880	39.055	50.584	1.00	34.44	C
ATOM	5213	C	ALA	A	351	49.136	40.024	50.514	1.00	37.47	C
ATOM	5214	O	ALA	A	351	50.006	39.864	49.710	1.00	38.97	O
ATOM	5215	N	PHE	A	352	48.843	41.210	51.010	1.00	37.79	N
ATOM	5217	CA	PHE	A	352	49.495	42.407	50.491	1.00	39.28	C
ATOM	5219	CB	PHE	A	352	48.674	43.607	50.839	1.00	37.35	C
ATOM	5222	CG	PHE	A	352	47.296	43.459	50.390	1.00	35.68	C
ATOM	5223	CD1	PHE	A	352	46.310	43.146	51.249	1.00	35.62	C
ATOM	5225	CE1	PHE	A	352	45.040	42.971	50.821	1.00	35.56	C
ATOM	5227	CZ	PHE	A	352	44.760	43.037	49.504	1.00	37.20	C
ATOM	5229	CE2	PHE	A	352	45.774	43.277	48.616	1.00	38.11	C
ATOM	5231	CD2	PHE	A	352	47.016	43.468	49.070	1.00	38.39	C
ATOM	5233	C	PHE	A	352	50.912	42.564	50.942	1.00	42.10	C
ATOM	5234	O	PHE	A	352	51.661	43.264	50.308	1.00	45.13	O
ATOM	5235	N	ARG	A	353	51.318	41.916	52.018	1.00	42.10	N
ATOM	5237	CA	ARG	A	353	52.706	42.048	52.408	1.00	44.35	C
ATOM	5239	CB	ARG	A	353	52.810	42.476	53.863	1.00	44.18	C
ATOM	5242	CG	ARG	A	353	52.838	41.475	54.889	1.00	45.56	C
ATOM	5245	CD	ARG	A	353	52.340	41.993	56.328	1.00	46.05	C
ATOM	5248	NE	ARG	A	353	51.908	40.792	57.076	1.00	48.23	N

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ATOM 5250  CZ  ARG A 353      50.904  40.702  57.958  1.00 49.69           C
ATOM 5251  NH1 ARG A 353      50.159  41.766  58.367  1.00 48.00           N
ATOM 5254  NH2 ARG A 353      50.644  39.490  58.462  1.00 51.85           N
ATOM 5257  C   ARG A 353      53.606  40.883  52.034  1.00 45.87           C
ATOM 5258  O   ARG A 353      54.793  40.995  52.113  1.00 49.79           O
ATOM 5259  N   GLY A 354      53.077  39.819  51.471  1.00 44.58           N
ATOM 5261  CA  GLY A 354      53.844  38.608  51.326  1.00 45.57           C
ATOM 5264  C   GLY A 354      54.077  37.881  52.646  1.00 45.59           C
ATOM 5265  O   GLY A 354      53.795  38.404  53.757  1.00 44.40           O
ATOM 5266  N   ASP A 355      54.560  36.657  52.489  1.00 47.02           N
ATOM 5268  CA  ASP A 355      54.875  35.747  53.559  1.00 49.26           C
ATOM 5270  CB  ASP A 355      53.675  34.810  53.761  1.00 47.45           C
ATOM 5273  CG  ASP A 355      53.819  33.857  54.999  1.00 52.55           C
ATOM 5274  OD1 ASP A 355      54.748  33.966  55.843  1.00 52.58           O
ATOM 5275  OD2 ASP A 355      52.964  32.945  55.218  1.00 57.12           O
ATOM 5276  C   ASP A 355      56.184  34.963  53.184  1.00 52.90           C
ATOM 5277  O   ASP A 355      56.230  34.283  52.193  1.00 53.38           O
ATOM 5278  N   SER A 356      57.257  35.097  53.951  1.00 55.22           N
ATOM 5280  CA  SER A 356      58.449  34.379  53.620  1.00 59.39           C
ATOM 5282  CB  SER A 356      59.693  35.013  54.276  1.00 62.91           C
ATOM 5285  OG  SER A 356      59.657  34.911  55.688  1.00 63.67           O
ATOM 5287  C   SER A 356      58.280  32.920  54.042  1.00 59.92           C
ATOM 5288  O   SER A 356      58.935  31.998  53.497  1.00 62.62           O
ATOM 5289  N   PHE A 357      57.411  32.695  55.015  1.00 57.30           N
ATOM 5291  CA  PHE A 357      57.303  31.355  55.591  1.00 58.59           C
ATOM 5293  CB  PHE A 357      56.605  31.427  56.964  1.00 57.36           C
ATOM 5296  CG  PHE A 357      57.294  32.421  57.919  1.00 60.90           C
ATOM 5297  CD1 PHE A 357      56.748  33.697  58.164  1.00 59.90           C
ATOM 5299  CE1 PHE A 357      57.381  34.597  59.001  1.00 62.61           C
ATOM 5301  CZ  PHE A 357      58.620  34.277  59.612  1.00 66.42           C
ATOM 5303  CE2 PHE A 357      59.197  33.034  59.358  1.00 70.78           C
ATOM 5305  CD2 PHE A 357      58.530  32.102  58.516  1.00 68.20           C
ATOM 5307  C   PHE A 357      56.638  30.400  54.612  1.00 57.26           C
ATOM 5308  O   PHE A 357      56.959  29.213  54.566  1.00 59.38           O
ATOM 5309  N   THR A 358      55.781  30.990  53.792  1.00 53.74           N
ATOM 5311  CA  THR A 358      54.993  30.317  52.788  1.00 52.07           C
ATOM 5313  CB  THR A 358      53.638  30.968  52.871  1.00 48.69           C
ATOM 5315  OG1 THR A 358      52.927  30.251  53.847  1.00 49.41           O
ATOM 5317  CG2 THR A 358      52.787  30.701  51.766  1.00 49.09           C
ATOM 5321  C   THR A 358      55.512  30.469  51.384  1.00 52.42           C
ATOM 5322  O   THR A 358      54.936  29.873  50.469  1.00 50.78           O
ATOM 5323  N   HIS A 359      56.595  31.258  51.252  1.00 53.66           N
ATOM 5325  CA  HIS A 359      57.166  31.739  49.989  1.00 54.99           C
ATOM 5327  CB  HIS A 359      57.756  30.604  49.243  1.00 57.50           C
ATOM 5330  CG  HIS A 359      58.370  29.588  50.107  1.00 58.68           C
ATOM 5331  ND1 HIS A 359      59.709  29.584  50.363  1.00 63.58           N
ATOM 5333  CE1 HIS A 359      60.000  28.539  51.119  1.00 64.70           C
ATOM 5335  NE2 HIS A 359      58.883  27.896  51.392  1.00 61.34           N
ATOM 5337  CD2 HIS A 359      57.855  28.510  50.738  1.00 58.13           C
ATOM 5339  C   HIS A 359      56.194  32.451  49.042  1.00 52.38           C
ATOM 5340  O   HIS A 359      56.192  32.210  47.892  1.00 53.48           O
ATOM 5341  N   THR A 360      55.402  33.359  49.534  1.00 50.00           N
ATOM 5343  CA  THR A 360      54.434  34.040  48.722  1.00 48.70           C
ATOM 5345  CB  THR A 360      53.195  33.835  49.430  1.00 45.16           C
ATOM 5347  OG1 THR A 360      52.938  32.444  49.359  1.00 46.70           O
ATOM 5349  CG2 THR A 360      52.036  34.453  48.731  1.00 44.91           C
ATOM 5353  C   THR A 360      54.786  35.512  48.561  1.00 48.92           C
ATOM 5354  O   THR A 360      54.978  36.188  49.533  1.00 48.33           O
ATOM 5355  N   PRO A 361      55.010  35.986  47.351  1.00 50.79           N
ATOM 5356  CA  PRO A 361      55.426  37.375  47.190  1.00 51.83           C
ATOM 5358  CB  PRO A 361      55.759  37.484  45.706  1.00 54.65           C
ATOM 5361  CG  PRO A 361      55.333  36.260  45.089  1.00 54.61           C
ATOM 5364  CD  PRO A 361      55.017  35.248  46.088  1.00 52.35           C
ATOM 5367  C   PRO A 361      54.285  38.263  47.500  1.00 48.71           C
ATOM 5368  O   PRO A 361      53.182  37.783  47.427  1.00 47.40           O
ATOM 5369  N   PRO A 362      54.507  39.526  47.794  1.00 48.27           N
ATOM 5370  CA  PRO A 362      53.421  40.468  47.950  1.00 46.05           C
ATOM 5372  CB  PRO A 362      54.162  41.791  48.029  1.00 47.43           C
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ATOM	5375	CG	PRO	A	362	55.417	41.523	47.789	1.00 49.64	C
ATOM	5378	CD	PRO	A	362	55.780	40.167	48.028	1.00 50.35	C
ATOM	5381	C	PRO	A	362	52.473	40.437	46.765	1.00 45.74	C
ATOM	5382	O	PRO	A	362	52.943	40.284	45.696	1.00 49.40	O
ATOM	5383	N	LEU	A	363	51.189	40.595	46.966	1.00 44.33	N
ATOM	5385	CA	LEU	A	363	50.174	40.533	45.920	1.00 44.66	C
ATOM	5387	CB	LEU	A	363	48.831	40.112	46.510	1.00 41.08	C
ATOM	5390	CG	LEU	A	363	47.517	40.078	45.722	1.00 40.32	C
ATOM	5392	CD1	LEU	A	363	47.305	39.026	44.654	1.00 41.76	C
ATOM	5396	CD2	LEU	A	363	46.293	39.759	46.643	1.00 37.90	C
ATOM	5400	C	LEU	A	363	49.957	41.904	45.321	1.00 46.91	C
ATOM	5401	O	LEU	A	363	49.602	42.858	46.011	1.00 46.28	O
ATOM	5402	N	ASP	A	364	50.142	41.990	44.006	1.00 50.07	N
ATOM	5404	CA	ASP	A	364	49.742	43.191	43.278	1.00 50.91	C
ATOM	5406	CB	ASP	A	364	50.197	43.079	41.819	1.00 54.23	C
ATOM	5409	CG	ASP	A	364	49.881	44.322	40.987	1.00 56.02	C
ATOM	5410	OD1	ASP	A	364	49.213	45.282	41.502	1.00 50.42	O
ATOM	5411	OD2	ASP	A	364	50.278	44.378	39.776	1.00 60.00	O
ATOM	5412	C	ASP	A	364	48.221	43.399	43.404	1.00 47.27	C
ATOM	5413	O	ASP	A	364	47.433	42.672	42.883	1.00 45.88	O
ATOM	5414	N	PRO	A	365	47.821	44.436	44.058	1.00 46.25	N
ATOM	5415	CA	PRO	A	365	46.404	44.751	44.166	1.00 45.25	C
ATOM	5417	CB	PRO	A	365	46.408	46.030	44.972	1.00 45.77	C
ATOM	5420	CG	PRO	A	365	47.706	45.971	45.683	1.00 46.71	C
ATOM	5423	CD	PRO	A	365	48.660	45.428	44.709	1.00 47.17	C
ATOM	5426	C	PRO	A	365	45.610	45.003	42.889	1.00 47.18	C
ATOM	5427	O	PRO	A	365	44.431	44.806	43.003	1.00 46.77	O
ATOM	5428	N	GLN	A	366	46.155	45.502	41.778	1.00 50.90	N
ATOM	5430	CA	GLN	A	366	45.415	45.498	40.507	1.00 52.74	C
ATOM	5432	CB	GLN	A	366	46.289	45.759	39.264	1.00 56.32	C
ATOM	5439	C	GLN	A	366	44.779	44.131	40.329	1.00 51.62	C
ATOM	5440	O	GLN	A	366	43.737	44.006	39.686	1.00 53.12	O
ATOM	5441	N	GLU	A	367	45.392	43.090	40.873	1.00 49.93	N
ATOM	5443	CA	GLU	A	367	44.957	41.743	40.530	1.00 49.07	C
ATOM	5445	CB	GLU	A	367	46.016	40.748	40.955	1.00 49.47	C
ATOM	5448	CG	GLU	A	367	47.254	40.827	40.170	1.00 55.32	C
ATOM	5451	CD	GLU	A	367	47.521	39.537	39.415	1.00 65.30	C
ATOM	5452	OE1	GLU	A	367	47.045	39.472	38.236	1.00 71.91	O
ATOM	5453	OE2	GLU	A	367	48.219	38.601	39.984	1.00 69.48	O
ATOM	5454	C	GLU	A	367	43.609	41.341	41.121	1.00 44.37	C
ATOM	5455	O	GLU	A	367	43.026	40.320	40.783	1.00 43.44	O
ATOM	5456	N	LEU	A	368	43.146	42.122	42.045	1.00 41.59	N
ATOM	5458	CA	LEU	A	368	41.862	41.872	42.622	1.00 39.34	C
ATOM	5460	CB	LEU	A	368	41.649	42.755	43.821	1.00 37.40	C
ATOM	5463	CG	LEU	A	368	42.571	42.306	44.922	1.00 37.05	C
ATOM	5465	CD1	LEU	A	368	42.591	43.311	46.006	1.00 37.85	C
ATOM	5469	CD2	LEU	A	368	42.136	40.982	45.456	1.00 37.21	C
ATOM	5473	C	LEU	A	368	40.775	42.088	41.612	1.00 40.58	C
ATOM	5474	O	LEU	A	368	39.749	41.513	41.759	1.00 39.88	O
ATOM	5475	N	ASP	A	369	41.013	42.861	40.558	1.00 44.30	N
ATOM	5477	CA	ASP	A	369	40.101	42.958	39.417	1.00 46.16	C
ATOM	5479	CB	ASP	A	369	40.752	43.678	38.251	1.00 50.23	C
ATOM	5482	CG	ASP	A	369	41.010	45.227	38.506	1.00 55.84	C
ATOM	5483	OD1	ASP	A	369	40.507	45.849	39.505	1.00 57.91	O
ATOM	5484	OD2	ASP	A	369	41.782	45.893	37.753	1.00 60.79	O
ATOM	5485	C	ASP	A	369	39.621	41.612	38.939	1.00 45.71	C
ATOM	5486	O	ASP	A	369	38.531	41.537	38.475	1.00 46.84	O
ATOM	5487	N	ILE	A	370	40.412	40.553	39.067	1.00 45.58	N
ATOM	5489	CA	ILE	A	370	40.011	39.148	38.769	1.00 46.13	C
ATOM	5491	CB	ILE	A	370	41.135	38.210	39.219	1.00 46.46	C
ATOM	5493	CG1	ILE	A	370	42.075	37.803	38.072	1.00 50.66	C
ATOM	5496	CD1	ILE	A	370	43.582	37.835	38.532	1.00 51.51	C
ATOM	5500	CG2	ILE	A	370	40.622	36.949	39.735	1.00 47.70	C
ATOM	5504	C	ILE	A	370	38.727	38.626	39.419	1.00 43.97	C
ATOM	5505	O	ILE	A	370	37.935	37.986	38.824	1.00 45.31	O
ATOM	5506	N	LEU	A	371	38.532	38.885	40.675	1.00 41.68	N
ATOM	5508	CA	LEU	A	371	37.290	38.530	41.354	1.00 39.69	C
ATOM	5510	CB	LEU	A	371	37.476	38.789	42.863	1.00 37.02	C

ATOM	5513	CG	LEU	A	371	38.785	38.136	43.352	1.00 36.34	C
ATOM	5515	CD1	LEU	A	371	39.215	38.574	44.651	1.00 34.34	C
ATOM	5519	CD2	LEU	A	371	38.586	36.658	43.371	1.00 38.01	C
ATOM	5523	C	LEU	A	371	36.031	39.257	40.875	1.00 40.31	C
ATOM	5524	O	LEU	A	371	34.962	38.940	41.363	1.00 38.85	O
ATOM	5525	N	LYS	A	372	36.131	40.222	39.959	1.00 42.21	N
ATOM	5527	CA	LYS	A	372	34.932	40.898	39.422	1.00 43.84	C
ATOM	5529	CB	LYS	A	372	35.285	41.942	38.377	1.00 46.36	C
ATOM	5532	CG	LYS	A	372	35.513	43.305	38.954	1.00 47.88	C
ATOM	5535	CD	LYS	A	372	36.436	44.155	38.058	1.00 51.39	C
ATOM	5538	CE	LYS	A	372	36.918	45.449	38.779	1.00 53.07	C
ATOM	5541	NZ	LYS	A	372	38.090	46.150	38.045	1.00 59.80	N
ATOM	5545	C	LYS	A	372	33.950	39.980	38.766	1.00 44.83	C
ATOM	5546	O	LYS	A	372	32.860	40.345	38.495	1.00 45.62	O
ATOM	5547	N	THR	A	373	34.355	38.775	38.458	1.00 46.35	N
ATOM	5549	CA	THR	A	373	33.487	37.815	37.799	1.00 47.94	C
ATOM	5551	CB	THR	A	373	34.382	36.802	37.192	1.00 48.66	C
ATOM	5553	OG1	THR	A	373	35.052	37.419	36.130	1.00 51.06	O
ATOM	5555	CG2	THR	A	373	33.564	35.865	36.391	1.00 55.55	C
ATOM	5559	C	THR	A	373	32.508	37.084	38.700	1.00 45.96	C
ATOM	5560	O	THR	A	373	31.617	36.372	38.216	1.00 48.41	O
ATOM	5561	N	VAL	A	374	32.706	37.253	39.998	1.00 42.63	N
ATOM	5563	CA	VAL	A	374	32.140	36.424	41.020	1.00 40.86	C
ATOM	5565	CB	VAL	A	374	33.088	36.339	42.283	1.00 38.33	C
ATOM	5567	CG1	VAL	A	374	32.534	35.381	43.293	1.00 37.92	C
ATOM	5571	CG2	VAL	A	374	34.458	35.804	41.921	1.00 38.98	C
ATOM	5575	C	VAL	A	374	30.751	36.893	41.416	1.00 40.06	C
ATOM	5576	O	VAL	A	374	30.539	38.005	41.826	1.00 39.99	O
ATOM	5577	N	LYS	A	375	29.823	35.983	41.353	1.00 40.81	N
ATOM	5579	CA	LYS	A	375	28.452	36.273	41.649	1.00 42.35	C
ATOM	5581	CB	LYS	A	375	27.541	35.795	40.477	1.00 46.59	C
ATOM	5584	CG	LYS	A	375	27.777	36.549	39.090	1.00 50.24	C
ATOM	5587	CD	LYS	A	375	26.669	36.227	38.059	1.00 57.80	C
ATOM	5590	CE	LYS	A	375	27.128	36.178	36.545	1.00 62.46	C
ATOM	5593	NZ	LYS	A	375	26.016	36.062	35.526	1.00 61.68	N
ATOM	5597	C	LYS	A	375	28.008	35.654	42.952	1.00 40.06	C
ATOM	5598	O	LYS	A	375	27.173	36.205	43.624	1.00 39.08	O
ATOM	5599	N	GLU	A	376	28.528	34.503	43.309	1.00 39.23	N
ATOM	5601	CA	GLU	A	376	28.081	33.914	44.552	1.00 39.53	C
ATOM	5603	CB	GLU	A	376	26.947	32.867	44.334	1.00 41.78	C
ATOM	5606	CG	GLU	A	376	27.373	31.519	43.819	1.00 44.47	C
ATOM	5609	CD	GLU	A	376	26.253	30.494	43.764	1.00 47.77	C
ATOM	5610	OE1	GLU	A	376	25.436	30.495	44.646	1.00 51.29	O
ATOM	5611	OE2	GLU	A	376	26.180	29.681	42.851	1.00 49.03	O
ATOM	5612	C	GLU	A	376	29.214	33.326	45.341	1.00 37.53	C
ATOM	5613	O	GLU	A	376	30.135	32.819	44.752	1.00 38.28	O
ATOM	5614	N	LEU	A	377	29.159	33.465	46.662	1.00 35.71	N
ATOM	5616	CA	LEU	A	377	29.980	32.695	47.555	1.00 35.03	C
ATOM	5618	CB	LEU	A	377	30.888	33.582	48.445	1.00 32.95	C
ATOM	5621	CG	LEU	A	377	31.383	34.875	47.722	1.00 32.32	C
ATOM	5623	CD1	LEU	A	377	32.373	35.705	48.488	1.00 30.13	C
ATOM	5627	CD2	LEU	A	377	32.034	34.537	46.491	1.00 36.27	C
ATOM	5631	C	LEU	A	377	29.001	31.854	48.361	1.00 36.88	C
ATOM	5632	O	LEU	A	377	28.064	32.351	48.983	1.00 37.14	O
ATOM	5633	N	THR	A	378	29.199	30.548	48.278	1.00 38.82	N
ATOM	5635	CA	THR	A	378	28.558	29.513	49.108	1.00 39.57	C
ATOM	5637	CB	THR	A	378	29.221	28.290	48.593	1.00 41.13	C
ATOM	5639	OG1	THR	A	378	28.353	27.866	47.593	1.00 41.94	O
ATOM	5641	CG2	THR	A	378	29.395	27.056	49.550	1.00 44.08	C
ATOM	5645	C	THR	A	378	28.753	29.721	50.604	1.00 37.78	C
ATOM	5646	O	THR	A	378	27.843	29.535	51.415	1.00 36.72	O
ATOM	5647	N	GLY	A	379	29.962	30.195	50.908	1.00 36.56	N
ATOM	5649	CA	GLY	A	379	30.487	30.357	52.264	1.00 35.72	C
ATOM	5652	C	GLY	A	379	30.468	31.774	52.761	1.00 33.26	C
ATOM	5653	O	GLY	A	379	29.453	32.421	52.744	1.00 34.48	O
ATOM	5654	N	PHE	A	380	31.604	32.269	53.181	1.00 31.43	N
ATOM	5656	CA	PHE	A	380	31.641	33.606	53.748	1.00 30.14	C
ATOM	5658	CB	PHE	A	380	31.949	33.563	55.237	1.00 29.78	C

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ATOM 5661  CG  PHE A 380      33.326  33.040  55.606  1.00 28.19           C
ATOM 5662  CD1 PHE A 380      34.468  33.856  55.512  1.00 26.22           C
ATOM 5664  CE1 PHE A 380      35.680  33.405  55.974  1.00 25.15           C
ATOM 5666  CZ  PHE A 380      35.755  32.140  56.510  1.00 26.34           C
ATOM 5668  CE2 PHE A 380      34.631  31.325  56.573  1.00 27.52           C
ATOM 5670  CD2 PHE A 380      33.459  31.771  56.148  1.00 27.63           C
ATOM 5672  C   PHE A 380      32.649  34.455  53.086  1.00 28.80           C
ATOM 5673  O   PHE A 380      33.535  33.928  52.414  1.00 30.25           O
ATOM 5674  N   LEU A 381      32.580  35.737  53.345  1.00 26.76           N
ATOM 5676  CA  LEU A 381      33.462  36.629  52.687  1.00 27.56           C
ATOM 5678  CB  LEU A 381      32.671  37.545  51.773  1.00 27.59           C
ATOM 5681  CG  LEU A 381      33.418  38.759  51.282  1.00 28.54           C
ATOM 5683  CD1 LEU A 381      34.748  38.298  50.721  1.00 30.46           C
ATOM 5687  CD2 LEU A 381      32.616  39.439  50.209  1.00 32.21           C
ATOM 5691  C   LEU A 381      34.189  37.411  53.743  1.00 27.21           C
ATOM 5692  O   LEU A 381      33.594  38.246  54.431  1.00 28.39           O
ATOM 5693  N   LEU A 382      35.471  37.202  53.868  1.00 26.93           N
ATOM 5695  CA  LEU A 382      36.188  37.838  54.953  1.00 27.83           C
ATOM 5697  CB  LEU A 382      36.849  36.750  55.764  1.00 28.01           C
ATOM 5700  CG  LEU A 382      37.909  37.206  56.753  1.00 29.87           C
ATOM 5702  CD1 LEU A 382      37.249  38.057  57.829  1.00 31.23           C
ATOM 5706  CD2 LEU A 382      38.571  36.020  57.423  1.00 29.60           C
ATOM 5710  C   LEU A 382      37.239  38.826  54.424  1.00 27.94           C
ATOM 5711  O   LEU A 382      38.189  38.425  53.770  1.00 28.55           O
ATOM 5712  N   ILE A 383      37.106  40.104  54.738  1.00 28.44           N
ATOM 5714  CA  ILE A 383      37.992  41.136  54.168  1.00 29.01           C
ATOM 5716  CB  ILE A 383      37.182  42.076  53.298  1.00 30.11           C
ATOM 5718  CG1 ILE A 383      36.362  41.266  52.311  1.00 31.00           C
ATOM 5721  CD1 ILE A 383      35.938  42.136  51.127  1.00 32.70           C
ATOM 5725  CG2 ILE A 383      38.119  43.072  52.508  1.00 29.84           C
ATOM 5729  C   ILE A 383      38.695  41.952  55.210  1.00 28.25           C
ATOM 5730  O   ILE A 383      38.130  42.865  55.743  1.00 27.90           O
ATOM 5731  N   GLN A 384      39.944  41.635  55.486  1.00 28.72           N
ATOM 5733  CA  GLN A 384      40.640  42.232  56.611  1.00 28.78           C
ATOM 5735  CB  GLN A 384      41.213  41.148  57.429  1.00 28.34           C
ATOM 5738  CG  GLN A 384      40.192  40.473  58.315  1.00 27.69           C
ATOM 5741  CD  GLN A 384      40.787  39.489  59.310  1.00 25.79           C
ATOM 5742  OE1 GLN A 384      41.947  39.167  59.277  1.00 29.42           O
ATOM 5743  NE2 GLN A 384      39.997  39.070  60.220  1.00 29.85           N
ATOM 5746  C   GLN A 384      41.735  43.122  56.073  1.00 30.69           C
ATOM 5747  O   GLN A 384      42.402  43.817  56.826  1.00 33.98           O
ATOM 5748  N   ALA A 385      41.892  43.164  54.756  1.00 30.13           N
ATOM 5750  CA  ALA A 385      42.856  44.036  54.126  1.00 30.49           C
ATOM 5752  CB  ALA A 385      44.242  43.332  54.044  1.00 30.62           C
ATOM 5756  C   ALA A 385      42.348  44.372  52.728  1.00 31.09           C
ATOM 5757  O   ALA A 385      41.586  43.598  52.083  1.00 30.22           O
ATOM 5758  N   TRP A 386      42.808  45.504  52.232  1.00 32.17           N
ATOM 5760  CA  TRP A 386      42.343  45.986  50.991  1.00 33.08           C
ATOM 5762  CB  TRP A 386      40.903  46.412  51.231  1.00 32.74           C
ATOM 5765  CG  TRP A 386      40.173  46.579  50.012  1.00 36.40           C
ATOM 5766  CD1 TRP A 386      39.885  47.756  49.354  1.00 40.08           C
ATOM 5768  NE1 TRP A 386      39.158  47.478  48.227  1.00 40.21           N
ATOM 5770  CE2 TRP A 386      39.049  46.114  48.114  1.00 40.12           C
ATOM 5771  CD2 TRP A 386      39.676  45.539  49.213  1.00 35.62           C
ATOM 5772  CE3 TRP A 386      39.657  44.174  49.339  1.00 34.88           C
ATOM 5774  CZ3 TRP A 386      39.049  43.446  48.400  1.00 37.08           C
ATOM 5776  CH2 TRP A 386      38.429  44.025  47.329  1.00 39.08           C
ATOM 5778  CZ2 TRP A 386      38.425  45.359  47.159  1.00 42.51           C
ATOM 5780  C   TRP A 386      43.127  47.177  50.563  1.00 34.61           C
ATOM 5781  O   TRP A 386      43.390  48.039  51.341  1.00 37.82           O
ATOM 5782  N   PRO A 387      43.434  47.332  49.320  1.00 36.03           N
ATOM 5783  CA  PRO A 387      44.281  48.435  48.949  1.00 38.07           C
ATOM 5785  CB  PRO A 387      44.323  48.312  47.443  1.00 39.84           C
ATOM 5788  CG  PRO A 387      43.252  47.516  47.081  1.00 38.50           C
ATOM 5791  CD  PRO A 387      42.989  46.569  48.156  1.00 36.66           C
ATOM 5794  C   PRO A 387      43.736  49.784  49.409  1.00 39.23           C
ATOM 5795  O   PRO A 387      42.603  50.184  49.169  1.00 39.83           O
ATOM 5796  N   GLU A 388      44.573  50.483  50.137  1.00 41.44           N
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ATOM	5798	CA	GLU	A	388	44.233	51.765	50.763	1.00 43.29	C
ATOM	5800	CB	GLU	A	388	45.383	52.255	51.622	1.00 45.21	C
ATOM	5803	CG	GLU	A	388	45.567	51.443	52.897	1.00 45.28	C
ATOM	5806	CD	GLU	A	388	46.796	51.891	53.654	1.00 52.65	C
ATOM	5807	OE1	GLU	A	388	47.893	51.297	53.459	1.00 53.52	O
ATOM	5808	OE2	GLU	A	388	46.653	52.891	54.420	1.00 57.96	O
ATOM	5809	C	GLU	A	388	43.796	52.887	49.862	1.00 45.35	C
ATOM	5810	O	GLU	A	388	43.063	53.764	50.284	1.00 45.89	O
ATOM	5811	N	ASN	A	389	44.170	52.836	48.609	1.00 47.38	N
ATOM	5813	CA	ASN	A	389	43.678	53.842	47.663	1.00 50.51	C
ATOM	5815	CB	ASN	A	389	44.805	54.240	46.668	1.00 54.16	C
ATOM	5818	CG	ASN	A	389	45.254	53.045	45.796	1.00 56.14	C
ATOM	5819	OD1	ASN	A	389	45.805	52.052	46.328	1.00 62.07	O
ATOM	5820	ND2	ASN	A	389	44.886	53.055	44.521	1.00 57.83	N
ATOM	5823	C	ASN	A	389	42.455	53.391	46.860	1.00 49.44	C
ATOM	5824	O	ASN	A	389	42.303	53.859	45.756	1.00 52.95	O
ATOM	5825	N	ARG	A	390	41.611	52.494	47.344	1.00 46.09	N
ATOM	5827	CA	ARG	A	390	40.371	52.217	46.649	1.00 46.76	C
ATOM	5829	CB	ARG	A	390	40.234	50.742	46.244	1.00 45.10	C
ATOM	5832	CG	ARG	A	390	41.217	50.172	45.285	1.00 47.34	C
ATOM	5835	CD	ARG	A	390	41.438	50.956	43.977	1.00 53.54	C
ATOM	5838	NE	ARG	A	390	40.695	50.412	42.824	1.00 53.39	N
ATOM	5840	CZ	ARG	A	390	39.518	50.880	42.393	1.00 54.47	C
ATOM	5841	NH1	ARG	A	390	38.862	51.878	43.014	1.00 59.31	N
ATOM	5844	NH2	ARG	A	390	38.951	50.325	41.362	1.00 52.63	N
ATOM	5847	C	ARG	A	390	39.172	52.536	47.545	1.00 46.14	C
ATOM	5848	O	ARG	A	390	38.999	51.940	48.589	1.00 44.17	O
ATOM	5849	N	THR	A	391	38.283	53.411	47.114	1.00 48.34	N
ATOM	5851	CA	THR	A	391	37.246	53.899	48.039	1.00 47.56	C
ATOM	5853	CB	THR	A	391	36.645	55.201	47.543	1.00 50.22	C
ATOM	5855	OG1	THR	A	391	35.870	54.878	46.403	1.00 51.02	O
ATOM	5857	CG2	THR	A	391	37.689	56.203	47.035	1.00 51.77	C
ATOM	5861	C	THR	A	391	36.102	52.893	48.239	1.00 45.74	C
ATOM	5862	O	THR	A	391	35.269	53.087	49.121	1.00 45.03	O
ATOM	5863	N	ASP	A	392	36.052	51.812	47.467	1.00 44.71	N
ATOM	5865	CA	ASP	A	392	35.129	50.743	47.833	1.00 42.13	C
ATOM	5867	CB	ASP	A	392	33.840	50.977	47.144	1.00 43.91	C
ATOM	5870	CG	ASP	A	392	33.994	51.000	45.722	1.00 45.23	C
ATOM	5871	OD1	ASP	A	392	35.000	50.496	45.229	1.00 45.27	O
ATOM	5872	OD2	ASP	A	392	33.160	51.519	45.017	1.00 46.76	O
ATOM	5873	C	ASP	A	392	35.663	49.385	47.506	1.00 40.51	C
ATOM	5874	O	ASP	A	392	36.837	49.268	47.180	1.00 42.21	O
ATOM	5875	N	LEU	A	393	34.839	48.351	47.691	1.00 39.13	N
ATOM	5877	CA	LEU	A	393	35.208	46.964	47.389	1.00 37.38	C
ATOM	5879	CB	LEU	A	393	34.402	45.992	48.238	1.00 35.46	C
ATOM	5882	CG	LEU	A	393	34.425	46.226	49.733	1.00 34.54	C
ATOM	5884	CD1	LEU	A	393	33.565	45.205	50.454	1.00 34.20	C
ATOM	5888	CD2	LEU	A	393	35.810	46.075	50.173	1.00 34.63	C
ATOM	5892	C	LEU	A	393	34.967	46.666	45.901	1.00 38.22	C
ATOM	5893	O	LEU	A	393	34.103	45.865	45.572	1.00 38.13	O
ATOM	5894	N	HIS	A	394	35.752	47.300	45.025	1.00 38.65	N
ATOM	5896	CA	HIS	A	394	35.460	47.287	43.607	1.00 40.24	C
ATOM	5898	CB	HIS	A	394	36.506	48.073	42.878	1.00 41.20	C
ATOM	5901	CG	HIS	A	394	37.873	47.539	43.061	1.00 43.28	C
ATOM	5902	ND1	HIS	A	394	38.577	47.684	44.242	1.00 44.16	N
ATOM	5904	CE1	HIS	A	394	39.754	47.091	44.108	1.00 44.04	C
ATOM	5906	NE2	HIS	A	394	39.820	46.535	42.906	1.00 44.28	N
ATOM	5908	CD2	HIS	A	394	38.649	46.787	42.240	1.00 44.56	C
ATOM	5910	C	HIS	A	394	35.397	45.864	43.053	1.00 39.79	C
ATOM	5911	O	HIS	A	394	34.659	45.565	42.118	1.00 39.77	O
ATOM	5912	N	ALA	A	395	36.186	44.971	43.639	1.00 38.62	N
ATOM	5914	CA	ALA	A	395	36.342	43.675	43.038	1.00 38.76	C
ATOM	5916	CB	ALA	A	395	37.493	43.036	43.581	1.00 37.86	C
ATOM	5920	C	ALA	A	395	35.102	42.811	43.228	1.00 38.35	C
ATOM	5921	O	ALA	A	395	34.964	41.819	42.513	1.00 39.40	O
ATOM	5922	N	PHE	A	396	34.194	43.239	44.111	1.00 36.67	N
ATOM	5924	CA	PHE	A	396	32.986	42.520	44.416	1.00 36.80	C
ATOM	5926	CB	PHE	A	396	32.934	42.244	45.922	1.00 35.11	C

ATOM	5929	CG	PHE	A	396	34.060	41.284	46.399	1.00 34.66	C
ATOM	5930	CD1	PHE	A	396	35.141	41.734	47.116	1.00 31.86	C
ATOM	5932	CE1	PHE	A	396	36.149	40.871	47.508	1.00 30.93	C
ATOM	5934	CZ	PHE	A	396	36.112	39.574	47.201	1.00 31.65	C
ATOM	5936	CE2	PHE	A	396	35.056	39.084	46.528	1.00 33.87	C
ATOM	5938	CD2	PHE	A	396	34.020	39.942	46.097	1.00 34.52	C
ATOM	5940	C	PHE	A	396	31.709	43.215	43.939	1.00 38.98	C
ATOM	5941	O	PHE	A	396	30.598	42.884	44.347	1.00 40.05	O
ATOM	5942	N	GLU	A	397	31.828	44.157	43.030	1.00 41.06	N
ATOM	5944	CA	GLU	A	397	30.664	44.849	42.495	1.00 43.09	C
ATOM	5946	CB	GLU	A	397	31.192	45.871	41.507	1.00 45.95	C
ATOM	5949	CG	GLU	A	397	31.738	45.211	40.255	1.00 49.91	C
ATOM	5952	CD	GLU	A	397	32.326	46.179	39.236	1.00 58.00	C
ATOM	5953	OE1	GLU	A	397	31.536	46.971	38.642	1.00 63.84	O
ATOM	5954	OE2	GLU	A	397	33.574	46.098	38.994	1.00 59.87	O
ATOM	5955	C	GLU	A	397	29.588	43.961	41.771	1.00 44.36	C
ATOM	5956	O	GLU	A	397	28.513	44.449	41.344	1.00 45.29	O
ATOM	5957	N	ASN	A	398	29.882	42.681	41.554	1.00 43.83	N
ATOM	5959	CA	ASN	A	398	28.902	41.797	40.905	1.00 44.75	C
ATOM	5961	CB	ASN	A	398	29.486	41.235	39.638	1.00 46.12	C
ATOM	5964	CG	ASN	A	398	29.691	42.290	38.613	1.00 46.75	C
ATOM	5965	OD1	ASN	A	398	28.812	43.035	38.309	1.00 50.16	O
ATOM	5966	ND2	ASN	A	398	30.866	42.371	38.097	1.00 47.71	N
ATOM	5969	C	ASN	A	398	28.408	40.673	41.794	1.00 43.09	C
ATOM	5970	O	ASN	A	398	27.632	39.847	41.387	1.00 44.84	O
ATOM	5971	N	LEU	A	399	28.830	40.707	43.033	1.00 40.07	N
ATOM	5973	CA	LEU	A	399	28.488	39.731	43.975	1.00 38.64	C
ATOM	5975	CB	LEU	A	399	29.387	39.940	45.179	1.00 35.59	C
ATOM	5978	CG	LEU	A	399	29.567	39.022	46.299	1.00 34.56	C
ATOM	5980	CD1	LEU	A	399	29.351	37.598	45.883	1.00 36.89	C
ATOM	5984	CD2	LEU	A	399	29.858	39.414	47.436	1.00 34.33	C
ATOM	5988	C	LEU	A	399	27.014	39.935	44.321	1.00 41.17	C
ATOM	5989	O	LEU	A	399	26.567	40.998	44.836	1.00 42.73	O
ATOM	5990	N	GLU	A	400	26.261	38.884	44.057	1.00 42.86	N
ATOM	5992	CA	GLU	A	400	24.817	38.875	44.151	1.00 44.43	C
ATOM	5994	CB	GLU	A	400	24.277	38.174	42.923	1.00 46.71	C
ATOM	5997	CG	GLU	A	400	24.484	39.044	41.719	1.00 50.19	C
ATOM	6000	CD	GLU	A	400	24.161	38.401	40.366	1.00 56.20	C
ATOM	6001	OE1	GLU	A	400	23.095	37.786	40.242	1.00 56.23	O
ATOM	6002	OE2	GLU	A	400	24.980	38.579	39.408	1.00 58.34	O
ATOM	6003	C	GLU	A	400	24.316	38.192	45.421	1.00 43.67	C
ATOM	6004	O	GLU	A	400	23.233	38.518	45.885	1.00 44.99	O
ATOM	6005	N	ILE	A	401	25.130	37.306	46.011	1.00 41.83	N
ATOM	6007	CA	ILE	A	401	24.737	36.490	47.162	1.00 40.84	C
ATOM	6009	CB	ILE	A	401	23.734	35.422	46.710	1.00 42.90	C
ATOM	6011	CG1	ILE	A	401	23.449	34.429	47.814	1.00 43.25	C
ATOM	6014	CD1	ILE	A	401	22.256	33.586	47.448	1.00 45.27	C
ATOM	6018	CG2	ILE	A	401	24.253	34.643	45.619	1.00 44.73	C
ATOM	6022	C	ILE	A	401	25.897	35.831	47.895	1.00 38.33	C
ATOM	6023	O	ILE	A	401	26.794	35.247	47.303	1.00 37.78	O
ATOM	6024	N	ILE	A	402	25.857	35.927	49.206	1.00 37.64	N
ATOM	6026	CA	ILE	A	402	26.758	35.219	50.099	1.00 35.89	C
ATOM	6028	CB	ILE	A	402	27.313	36.190	51.117	1.00 33.76	C
ATOM	6030	CG1	ILE	A	402	28.327	37.122	50.428	1.00 33.45	C
ATOM	6033	CD1	ILE	A	402	28.729	38.356	51.238	1.00 30.73	C
ATOM	6037	CG2	ILE	A	402	27.959	35.445	52.248	1.00 33.22	C
ATOM	6041	C	ILE	A	402	25.872	34.221	50.789	1.00 38.27	C
ATOM	6042	O	ILE	A	402	25.042	34.590	51.611	1.00 40.21	O
ATOM	6043	N	ARG	A	403	25.961	32.954	50.440	1.00 39.72	N
ATOM	6045	CA	ARG	A	403	25.029	31.971	51.036	1.00 41.41	C
ATOM	6047	CB	ARG	A	403	25.094	30.665	50.280	1.00 42.06	C
ATOM	6050	CG	ARG	A	403	24.566	30.759	48.913	1.00 42.50	C
ATOM	6053	CD	ARG	A	403	24.271	29.361	48.306	1.00 45.57	C
ATOM	6056	NE	ARG	A	403	23.861	29.447	46.910	1.00 46.93	N
ATOM	6058	CZ	ARG	A	403	22.741	30.008	46.512	1.00 49.93	C
ATOM	6059	NH1	ARG	A	403	21.876	30.503	47.387	1.00 52.29	N
ATOM	6062	NH2	ARG	A	403	22.461	30.068	45.235	1.00 52.68	N
ATOM	6065	C	ARG	A	403	25.272	31.712	52.541	1.00 40.44	C

ATOM	6066	O	ARG	A	403	24.332	31.432	53.262	1.00 41.87	O
ATOM	6067	N	GLY	A	404	26.520	31.772	52.979	1.00 38.47	N
ATOM	6069	CA	GLY	A	404	26.841	31.694	54.394	1.00 38.72	C
ATOM	6072	C	GLY	A	404	26.779	30.296	55.021	1.00 40.86	C
ATOM	6073	O	GLY	A	404	26.528	30.097	56.219	1.00 42.25	O
ATOM	6074	N	ARG	A	405	26.982	29.284	54.204	1.00 41.64	N
ATOM	6076	CA	ARG	A	405	26.955	27.903	54.687	1.00 43.01	C
ATOM	6078	CB	ARG	A	405	27.068	27.061	53.455	1.00 44.80	C
ATOM	6081	CG	ARG	A	405	25.790	26.999	52.727	1.00 46.83	C
ATOM	6084	CD	ARG	A	405	25.923	26.159	51.460	1.00 49.83	C
ATOM	6087	NE	ARG	A	405	24.656	26.202	50.690	1.00 54.46	N
ATOM	6089	CZ	ARG	A	405	24.534	25.597	49.539	1.00 55.52	C
ATOM	6090	NH1	ARG	A	405	25.589	24.930	49.073	1.00 55.71	N
ATOM	6093	NH2	ARG	A	405	23.379	25.608	48.890	1.00 59.28	N
ATOM	6096	C	ARG	A	405	28.043	27.497	55.659	1.00 40.66	C
ATOM	6097	O	ARG	A	405	27.881	26.744	56.531	1.00 41.11	O
ATOM	6098	N	THR	A	406	29.194	27.962	55.351	1.00 40.05	N
ATOM	6100	CA	THR	A	406	30.381	28.035	56.186	1.00 40.02	C
ATOM	6102	CB	THR	A	406	31.557	27.731	55.244	1.00 39.43	C
ATOM	6104	OG1	THR	A	406	31.310	26.463	54.715	1.00 43.84	O
ATOM	6106	CG2	THR	A	406	32.910	27.424	55.938	1.00 43.39	C
ATOM	6110	C	THR	A	406	30.393	29.475	56.679	1.00 37.35	C
ATOM	6111	O	THR	A	406	29.970	30.388	55.965	1.00 36.01	O
ATOM	6112	N	LYS	A	407	30.744	29.669	57.936	1.00 38.03	N
ATOM	6114	CA	LYS	A	407	30.913	31.032	58.480	1.00 37.24	C
ATOM	6116	CB	LYS	A	407	29.808	31.396	59.427	1.00 38.61	C
ATOM	6119	CG	LYS	A	407	28.408	31.305	58.843	1.00 39.27	C
ATOM	6122	CD	LYS	A	407	27.467	30.706	59.864	1.00 41.05	C
ATOM	6125	CE	LYS	A	407	26.150	30.400	59.316	1.00 44.32	C
ATOM	6128	NZ	LYS	A	407	25.229	31.288	60.019	1.00 52.24	N
ATOM	6132	C	LYS	A	407	32.218	31.114	59.237	1.00 37.24	C
ATOM	6133	O	LYS	A	407	32.849	30.135	59.489	1.00 40.60	O
ATOM	6134	N	GLN	A	408	32.674	32.299	59.552	1.00 36.38	N
ATOM	6136	CA	GLN	A	408	33.979	32.465	60.158	1.00 34.55	C
ATOM	6138	CB	GLN	A	408	34.581	33.801	59.825	1.00 32.09	C
ATOM	6141	CG	GLN	A	408	35.948	33.899	60.498	1.00 31.64	C
ATOM	6144	CD	GLN	A	408	36.473	35.248	60.620	1.00 30.23	C
ATOM	6145	OE1	GLN	A	408	35.772	36.221	60.467	1.00 39.71	O
ATOM	6146	NE2	GLN	A	408	37.680	35.336	60.852	1.00 26.16	N
ATOM	6149	C	GLN	A	408	33.734	32.402	61.666	1.00 35.59	C
ATOM	6150	O	GLN	A	408	32.869	33.106	62.167	1.00 34.95	O
ATOM	6151	N	HIS	A	409	34.501	31.551	62.338	1.00 35.68	N
ATOM	6153	CA	HIS	A	409	34.305	31.239	63.709	1.00 36.96	C
ATOM	6155	CB	HIS	A	409	34.594	32.495	64.525	1.00 36.30	C
ATOM	6158	CG	HIS	A	409	35.974	32.999	64.388	1.00 32.03	C
ATOM	6159	ND1	HIS	A	409	37.046	32.335	64.885	1.00 36.03	N
ATOM	6161	CE1	HIS	A	409	38.149	32.995	64.602	1.00 32.96	C
ATOM	6163	NE2	HIS	A	409	37.823	34.099	63.993	1.00 29.44	N
ATOM	6165	CD2	HIS	A	409	36.464	34.108	63.819	1.00 33.90	C
ATOM	6167	C	HIS	A	409	32.898	30.688	63.922	1.00 38.45	C
ATOM	6168	O	HIS	A	409	32.282	30.785	64.967	1.00 39.82	O
ATOM	6169	N	GLY	A	410	32.341	30.135	62.879	1.00 39.18	N
ATOM	6171	CA	GLY	A	410	30.948	29.727	62.974	1.00 40.64	C
ATOM	6174	C	GLY	A	410	30.003	30.872	63.123	1.00 39.89	C
ATOM	6175	O	GLY	A	410	28.908	30.596	63.288	1.00 40.91	O
ATOM	6176	N	ASN	A	411	30.443	32.129	63.096	1.00 39.05	N
ATOM	6178	CA	ASN	A	411	29.582	33.303	63.276	1.00 39.30	C
ATOM	6180	CB	ASN	A	411	30.176	34.429	64.213	1.00 39.22	C
ATOM	6183	CG	ASN	A	411	30.202	34.049	65.693	1.00 44.51	C
ATOM	6184	OD1	ASN	A	411	29.929	32.909	65.994	1.00 52.63	O
ATOM	6185	ND2	ASN	A	411	30.548	34.986	66.614	1.00 41.99	N
ATOM	6188	C	ASN	A	411	29.312	33.940	61.907	1.00 37.22	C
ATOM	6189	O	ASN	A	411	28.194	33.948	61.435	1.00 37.23	O
ATOM	6190	N	PHE	A	412	30.342	34.474	61.278	1.00 34.68	N
ATOM	6192	CA	PHE	A	412	30.135	35.478	60.287	1.00 33.77	C
ATOM	6194	CB	PHE	A	412	31.294	36.438	60.393	1.00 32.92	C
ATOM	6197	CG	PHE	A	412	31.440	37.028	61.750	1.00 33.90	C
ATOM	6198	CD1	PHE	A	412	32.607	36.831	62.507	1.00 34.35	C

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ATOM 6200  CE1 PHE A 412      32.708  37.353  63.793  1.00 31.85           C
ATOM 6202  CZ  PHE A 412      31.688  38.084  64.275  1.00 33.72           C
ATOM 6204  CE2 PHE A 412      30.575  38.290  63.552  1.00 33.28           C
ATOM 6206  CD2 PHE A 412      30.419  37.748  62.306  1.00 32.58           C
ATOM 6208  C   PHE A 412      30.053  34.983  58.856  1.00 33.95           C
ATOM 6209  O   PHE A 412      30.865  34.164  58.410  1.00 34.69           O
ATOM 6210  N   SER A 413      29.101  35.512  58.088  1.00 34.35           N
ATOM 6212  CA  SER A 413      29.154  35.319  56.617  1.00 33.33           C
ATOM 6214  CB  SER A 413      27.803  34.919  56.082  1.00 34.29           C
ATOM 6217  OG  SER A 413      26.927  35.986  56.195  1.00 34.47           O
ATOM 6219  C   SER A 413      29.711  36.474  55.800  1.00 31.62           C
ATOM 6220  O   SER A 413      29.980  36.268  54.679  1.00 30.19           O
ATOM 6221  N   LEU A 414      29.810  37.698  56.361  1.00 32.41           N
ATOM 6223  CA  LEU A 414      30.474  38.882  55.716  1.00 31.11           C
ATOM 6225  CB  LEU A 414      29.458  39.830  55.119  1.00 32.13           C
ATOM 6228  CG  LEU A 414      29.895  41.226  54.590  1.00 33.57           C
ATOM 6230  CD1 LEU A 414      31.044  41.176  53.529  1.00 33.54           C
ATOM 6234  CD2 LEU A 414      28.737  41.998  53.991  1.00 34.32           C
ATOM 6238  C   LEU A 414      31.241  39.660  56.755  1.00 30.16           C
ATOM 6239  O   LEU A 414      30.616  40.240  57.603  1.00 31.21           O
ATOM 6240  N   ALA A 415      32.565  39.668  56.721  1.00 28.59           N
ATOM 6242  CA  ALA A 415      33.347  40.421  57.709  1.00 28.16           C
ATOM 6244  CB  ALA A 415      34.171  39.540  58.506  1.00 27.51           C
ATOM 6248  C   ALA A 415      34.233  41.399  56.975  1.00 28.12           C
ATOM 6249  O   ALA A 415      34.998  41.005  56.099  1.00 28.60           O
ATOM 6250  N   VAL A 416      34.077  42.689  57.294  1.00 28.48           N
ATOM 6252  CA  VAL A 416      34.865  43.768  56.701  1.00 27.99           C
ATOM 6254  CB  VAL A 416      33.940  44.600  55.867  1.00 28.89           C
ATOM 6256  CG1 VAL A 416      34.667  45.745  55.232  1.00 29.37           C
ATOM 6260  CG2 VAL A 416      33.294  43.709  54.828  1.00 29.55           C
ATOM 6264  C   VAL A 416      35.492  44.588  57.822  1.00 27.40           C
ATOM 6265  O   VAL A 416      34.788  45.252  58.514  1.00 28.63           O
ATOM 6266  N   VAL A 417      36.805  44.579  57.982  1.00 26.45           N
ATOM 6268  CA  VAL A 417      37.390  45.086  59.181  1.00 27.04           C
ATOM 6270  CB  VAL A 417      37.707  43.940  60.175  1.00 27.03           C
ATOM 6272  CG1 VAL A 417      38.177  44.508  61.435  1.00 31.02           C
ATOM 6276  CG2 VAL A 417      36.616  43.085  60.494  1.00 25.94           C
ATOM 6280  C   VAL A 417      38.700  45.849  58.959  1.00 27.79           C
ATOM 6281  O   VAL A 417      39.729  45.304  58.592  1.00 28.44           O
ATOM 6282  N   SER A 418      38.659  47.118  59.304  1.00 29.69           N
ATOM 6284  CA  SER A 418      39.783  48.037  59.273  1.00 29.96           C
ATOM 6286  CB  SER A 418      40.834  47.559  60.216  1.00 30.43           C
ATOM 6289  OG  SER A 418      41.770  48.555  60.517  1.00 34.34           O
ATOM 6291  C   SER A 418      40.320  48.213  57.889  1.00 30.06           C
ATOM 6292  O   SER A 418      41.441  48.007  57.668  1.00 30.27           O
ATOM 6293  N   LEU A 419      39.473  48.581  56.934  1.00 30.95           N
ATOM 6295  CA  LEU A 419      39.881  49.016  55.578  1.00 30.62           C
ATOM 6297  CB  LEU A 419      38.974  48.380  54.560  1.00 29.76           C
ATOM 6300  CG  LEU A 419      38.564  46.915  54.692  1.00 27.89           C
ATOM 6302  CD1 LEU A 419      37.844  46.349  53.455  1.00 26.37           C
ATOM 6306  CD2 LEU A 419      39.796  46.136  54.942  1.00 30.27           C
ATOM 6310  C   LEU A 419      39.787  50.520  55.513  1.00 31.84           C
ATOM 6311  O   LEU A 419      39.248  51.129  56.415  1.00 34.04           O
ATOM 6312  N   ASN A 420      40.347  51.141  54.505  1.00 32.95           N
ATOM 6314  CA  ASN A 420      40.409  52.602  54.421  1.00 35.62           C
ATOM 6316  CB  ASN A 420      41.682  53.008  53.739  1.00 37.74           C
ATOM 6319  CG  ASN A 420      41.961  54.452  53.815  1.00 40.33           C
ATOM 6320  OD1 ASN A 420      41.713  55.072  54.796  1.00 41.29           O
ATOM 6321  ND2 ASN A 420      42.543  54.991  52.774  1.00 42.87           N
ATOM 6324  C   ASN A 420      39.322  53.016  53.519  1.00 38.01           C
ATOM 6325  O   ASN A 420      39.319  54.112  53.010  1.00 41.16           O
ATOM 6326  N   ILE A 421      38.383  52.103  53.301  1.00 37.63           N
ATOM 6328  CA  ILE A 421      37.280  52.252  52.393  1.00 38.22           C
ATOM 6330  CB  ILE A 421      36.767  50.873  52.179  1.00 36.26           C
ATOM 6332  CG1 ILE A 421      36.784  50.662  50.724  1.00 40.93           C
ATOM 6335  CD1 ILE A 421      36.644  49.237  50.423  1.00 45.47           C
ATOM 6339  CG2 ILE A 421      35.404  50.467  52.732  1.00 34.04           C
ATOM 6343  C   ILE A 421      36.263  53.290  52.797  1.00 40.58           C
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ATOM	6344	O	ILE	A	421	36.203	53.706	53.954	1.00	42.88	O
ATOM	6345	N	THR	A	422	35.511	53.755	51.814	1.00	42.92	N
ATOM	6347	CA	THR	A	422	34.541	54.868	51.949	1.00	44.98	C
ATOM	6349	CB	THR	A	422	34.870	55.912	50.914	1.00	47.73	C
ATOM	6351	OG1	THR	A	422	36.200	56.430	51.181	1.00	49.14	O
ATOM	6353	CG2	THR	A	422	33.950	57.054	51.018	1.00	49.95	C
ATOM	6357	C	THR	A	422	33.106	54.418	51.763	1.00	44.41	C
ATOM	6358	O	THR	A	422	32.230	54.898	52.433	1.00	46.45	O
ATOM	6359	N	SER	A	423	32.876	53.462	50.889	1.00	42.64	N
ATOM	6361	CA	SER	A	423	31.626	52.762	50.831	1.00	41.79	C
ATOM	6363	CB	SER	A	423	30.874	53.300	49.666	1.00	44.68	C
ATOM	6366	OG	SER	A	423	31.655	53.146	48.490	1.00	46.25	O
ATOM	6368	C	SER	A	423	31.838	51.294	50.560	1.00	38.94	C
ATOM	6369	O	SER	A	423	32.862	50.907	50.044	1.00	37.59	O
ATOM	6370	N	LEU	A	424	30.846	50.468	50.858	1.00	38.17	N
ATOM	6372	CA	LEU	A	424	31.038	49.034	50.632	1.00	36.68	C
ATOM	6374	CB	LEU	A	424	29.949	48.233	51.394	1.00	35.68	C
ATOM	6377	CG	LEU	A	424	30.177	48.127	52.916	1.00	36.14	C
ATOM	6379	CD1	LEU	A	424	28.913	47.658	53.776	1.00	34.01	C
ATOM	6383	CD2	LEU	A	424	31.441	47.302	53.250	1.00	33.86	C
ATOM	6387	C	LEU	A	424	31.090	48.724	49.078	1.00	36.95	C
ATOM	6388	O	LEU	A	424	31.909	48.010	48.555	1.00	33.92	O
ATOM	6389	N	GLY	A	425	30.182	49.314	48.364	1.00	38.75	N
ATOM	6391	CA	GLY	A	425	30.155	49.084	46.969	1.00	40.99	C
ATOM	6394	C	GLY	A	425	29.443	47.814	46.622	1.00	41.20	C
ATOM	6395	O	GLY	A	425	29.472	47.443	45.460	1.00	44.17	O
ATOM	6396	N	LEU	A	426	28.805	47.141	47.566	1.00	40.36	N
ATOM	6398	CA	LEU	A	426	28.240	45.842	47.258	1.00	39.92	C
ATOM	6400	CB	LEU	A	426	28.082	45.026	48.527	1.00	37.76	C
ATOM	6403	CG	LEU	A	426	29.426	44.744	49.170	1.00	36.86	C
ATOM	6405	CD1	LEU	A	426	29.176	43.892	50.403	1.00	38.68	C
ATOM	6409	CD2	LEU	A	426	30.381	44.023	48.252	1.00	35.23	C
ATOM	6413	C	LEU	A	426	26.932	46.001	46.557	1.00	42.18	C
ATOM	6414	O	LEU	A	426	25.894	45.526	47.046	1.00	44.29	O
ATOM	6415	N	ARG	A	427	26.948	46.648	45.405	1.00	43.67	N
ATOM	6417	CA	ARG	A	427	25.710	47.033	44.753	1.00	46.27	C
ATOM	6419	CB	ARG	A	427	25.952	48.098	43.700	1.00	48.95	C
ATOM	6422	CG	ARG	A	427	26.781	47.687	42.500	1.00	51.08	C
ATOM	6425	CD	ARG	A	427	26.942	48.830	41.462	1.00	53.68	C
ATOM	6428	NE	ARG	A	427	27.600	49.930	42.126	1.00	52.90	N
ATOM	6430	CZ	ARG	A	427	28.907	49.974	42.333	1.00	54.16	C
ATOM	6431	NH1	ARG	A	427	29.687	49.026	41.855	1.00	56.67	N
ATOM	6434	NH2	ARG	A	427	29.469	50.978	42.973	1.00	53.42	N
ATOM	6437	C	ARG	A	427	24.921	45.923	44.137	1.00	46.88	C
ATOM	6438	O	ARG	A	427	23.864	46.167	43.683	1.00	49.33	O
ATOM	6439	N	SER	A	428	25.423	44.709	44.079	1.00	45.62	N
ATOM	6441	CA	SER	A	428	24.656	43.644	43.465	1.00	46.68	C
ATOM	6443	CB	SER	A	428	25.514	42.826	42.506	1.00	45.99	C
ATOM	6446	OG	SER	A	428	25.834	43.593	41.362	1.00	47.96	O
ATOM	6448	C	SER	A	428	24.148	42.720	44.486	1.00	45.95	C
ATOM	6449	O	SER	A	428	23.366	41.806	44.178	1.00	48.53	O
ATOM	6450	N	LEU	A	429	24.620	42.903	45.703	1.00	44.50	N
ATOM	6452	CA	LEU	A	429	24.329	41.963	46.753	1.00	43.25	C
ATOM	6454	CB	LEU	A	429	25.197	42.215	47.923	1.00	40.85	C
ATOM	6457	CG	LEU	A	429	25.039	41.129	48.966	1.00	40.60	C
ATOM	6459	CD1	LEU	A	429	25.400	39.734	48.410	1.00	40.92	C
ATOM	6463	CD2	LEU	A	429	25.895	41.522	50.121	1.00	38.94	C
ATOM	6467	C	LEU	A	429	22.889	42.116	47.185	1.00	45.57	C
ATOM	6468	O	LEU	A	429	22.516	43.074	47.852	1.00	46.09	O
ATOM	6469	N	LYS	A	430	22.079	41.148	46.801	1.00	46.89	N
ATOM	6471	CA	LYS	A	430	20.729	41.149	47.203	1.00	49.09	C
ATOM	6473	CB	LYS	A	430	19.848	40.867	46.020	1.00	52.17	C
ATOM	6476	CG	LYS	A	430	20.075	41.767	44.775	1.00	56.42	C
ATOM	6479	CD	LYS	A	430	20.040	43.323	45.059	1.00	58.97	C
ATOM	6482	CE	LYS	A	430	19.311	44.138	43.898	1.00	64.18	C
ATOM	6485	NZ	LYS	A	430	18.517	45.353	44.422	1.00	67.30	N
ATOM	6489	C	LYS	A	430	20.482	40.120	48.287	1.00	48.70	C
ATOM	6490	O	LYS	A	430	19.396	40.095	48.817	1.00	52.84	O

ATOM	6491	N	GLU	A	431	21.402	39.237	48.636	1.00 45.66	N
ATOM	6493	CA	GLU	A	431	20.996	38.242	49.591	1.00 44.87	C
ATOM	6495	CB	GLU	A	431	20.319	37.086	48.889	1.00 46.51	C
ATOM	6498	CG	GLU	A	431	20.122	35.923	49.821	1.00 47.21	C
ATOM	6501	CD	GLU	A	431	19.206	34.813	49.314	1.00 54.73	C
ATOM	6502	OE1	GLU	A	431	18.587	34.845	48.198	1.00 57.66	O
ATOM	6503	OE2	GLU	A	431	19.061	33.865	50.108	1.00 58.94	O
ATOM	6504	C	GLU	A	431	22.172	37.745	50.312	1.00 42.74	C
ATOM	6505	O	GLU	A	431	23.201	37.454	49.714	1.00 40.52	O
ATOM	6506	N	ILE	A	432	22.020	37.676	51.635	1.00 43.15	N
ATOM	6508	CA	ILE	A	432	22.953	36.946	52.541	1.00 40.67	C
ATOM	6510	CB	ILE	A	432	23.656	37.901	53.551	1.00 38.41	C
ATOM	6512	CG1	ILE	A	432	24.459	38.988	52.813	1.00 36.41	C
ATOM	6515	CD1	ILE	A	432	24.835	40.134	53.667	1.00 34.20	C
ATOM	6519	CG2	ILE	A	432	24.583	37.096	54.405	1.00 37.20	C
ATOM	6523	C	ILE	A	432	22.159	35.884	53.298	1.00 42.12	C
ATOM	6524	O	ILE	A	432	21.589	36.182	54.330	1.00 43.01	O
ATOM	6525	N	SER	A	433	22.116	34.665	52.767	1.00 43.12	N
ATOM	6527	CA	SER	A	433	21.267	33.580	53.285	1.00 45.85	C
ATOM	6529	CB	SER	A	433	21.474	32.275	52.493	1.00 46.97	C
ATOM	6532	OG	SER	A	433	21.513	32.412	51.072	1.00 47.67	O
ATOM	6534	C	SER	A	433	21.414	33.251	54.795	1.00 45.97	C
ATOM	6535	O	SER	A	433	20.426	33.093	55.543	1.00 49.16	O
ATOM	6536	N	ASP	A	434	22.636	33.142	55.246	1.00 43.68	N
ATOM	6538	CA	ASP	A	434	22.897	32.829	56.616	1.00 44.35	C
ATOM	6540	CB	ASP	A	434	23.092	31.311	56.710	1.00 46.18	C
ATOM	6543	CG	ASP	A	434	22.775	30.720	58.098	1.00 49.52	C
ATOM	6544	OD1	ASP	A	434	22.139	31.350	58.999	1.00 50.92	O
ATOM	6545	OD2	ASP	A	434	23.167	29.561	58.374	1.00 53.17	O
ATOM	6546	C	ASP	A	434	24.121	33.598	57.103	1.00 41.73	C
ATOM	6547	O	ASP	A	434	24.857	34.175	56.338	1.00 39.17	O
ATOM	6548	N	GLY	A	435	24.301	33.626	58.413	1.00 43.10	N
ATOM	6550	CA	GLY	A	435	25.468	34.230	59.044	1.00 41.52	C
ATOM	6553	C	GLY	A	435	25.300	35.685	59.493	1.00 40.59	C
ATOM	6554	O	GLY	A	435	24.326	36.283	59.093	1.00 42.87	O
ATOM	6555	N	ASP	A	436	26.244	36.248	60.256	1.00 38.15	N
ATOM	6557	CA	ASP	A	436	26.162	37.608	60.633	1.00 37.69	C
ATOM	6559	CB	ASP	A	436	26.451	37.759	62.063	1.00 38.84	C
ATOM	6562	CG	ASP	A	436	25.556	36.897	62.949	1.00 45.93	C
ATOM	6563	OD1	ASP	A	436	24.475	36.346	62.465	1.00 50.44	O
ATOM	6564	OD2	ASP	A	436	25.849	36.744	64.188	1.00 48.71	O
ATOM	6565	C	ASP	A	436	27.101	38.463	59.884	1.00 35.36	C
ATOM	6566	O	ASP	A	436	28.171	38.045	59.505	1.00 34.46	O
ATOM	6567	N	VAL	A	437	26.675	39.699	59.666	1.00 34.91	N
ATOM	6569	CA	VAL	A	437	27.539	40.698	59.138	1.00 32.89	C
ATOM	6571	CB	VAL	A	437	26.807	41.670	58.331	1.00 33.15	C
ATOM	6573	CG1	VAL	A	437	27.752	42.703	57.809	1.00 33.08	C
ATOM	6577	CG2	VAL	A	437	26.255	40.973	57.202	1.00 34.45	C
ATOM	6581	C	VAL	A	437	28.177	41.428	60.248	1.00 32.40	C
ATOM	6582	O	VAL	A	437	27.550	41.789	61.196	1.00 33.85	O
ATOM	6583	N	ILE	A	438	29.465	41.596	60.128	1.00 31.56	N
ATOM	6585	CA	ILE	A	438	30.196	42.496	60.980	1.00 32.05	C
ATOM	6587	CB	ILE	A	438	31.067	41.725	62.017	1.00 31.78	C
ATOM	6589	CG1	ILE	A	438	31.917	42.722	62.782	1.00 33.81	C
ATOM	6592	CD1	ILE	A	438	31.980	42.501	64.214	1.00 34.56	C
ATOM	6596	CG2	ILE	A	438	31.869	40.711	61.404	1.00 28.81	C
ATOM	6600	C	ILE	A	438	31.049	43.403	60.138	1.00 30.73	C
ATOM	6601	O	ILE	A	438	31.771	42.980	59.286	1.00 30.46	O
ATOM	6602	N	ILE	A	439	30.969	44.668	60.434	1.00 31.67	N
ATOM	6604	CA	ILE	A	439	31.661	45.697	59.693	1.00 31.64	C
ATOM	6606	CB	ILE	A	439	30.627	46.403	58.860	1.00 33.32	C
ATOM	6608	CG1	ILE	A	439	30.097	45.368	57.903	1.00 33.68	C
ATOM	6611	CD1	ILE	A	439	29.445	45.900	56.843	1.00 37.03	C
ATOM	6615	CG2	ILE	A	439	31.173	47.672	58.251	1.00 32.18	C
ATOM	6619	C	ILE	A	439	32.188	46.642	60.672	1.00 32.06	C
ATOM	6620	O	ILE	A	439	31.404	47.452	61.174	1.00 33.52	O
ATOM	6621	N	SER	A	440	33.472	46.512	60.990	1.00 31.48	N
ATOM	6623	CA	SER	A	440	34.064	47.352	61.993	1.00 32.75	C

ATOM	6625	CB	SER	A	440	34.033	46.654	63.346	1.00 34.08	C
ATOM	6628	OG	SER	A	440	35.219	46.099	63.813	1.00 30.62	O
ATOM	6630	C	SER	A	440	35.423	47.965	61.710	1.00 33.20	C
ATOM	6631	O	SER	A	440	36.301	47.431	61.050	1.00 31.65	O
ATOM	6632	N	GLY	A	441	35.564	49.154	62.243	1.00 34.51	N
ATOM	6634	CA	GLY	A	441	36.833	49.803	62.243	1.00 35.00	C
ATOM	6637	C	GLY	A	441	37.257	50.356	60.936	1.00 34.41	C
ATOM	6638	O	GLY	A	441	38.416	50.475	60.699	1.00 36.85	O
ATOM	6639	N	ASN	A	442	36.327	50.764	60.121	1.00 34.47	N
ATOM	6641	CA	ASN	A	442	36.633	51.433	58.902	1.00 34.18	C
ATOM	6643	CB	ASN	A	442	35.722	50.813	57.889	1.00 32.80	C
ATOM	6646	CG	ASN	A	442	35.795	49.277	57.918	1.00 31.45	C
ATOM	6647	OD1	ASN	A	442	36.767	48.706	57.513	1.00 31.51	O
ATOM	6648	ND2	ASN	A	442	34.759	48.620	58.385	1.00 33.37	N
ATOM	6651	C	ASN	A	442	36.483	52.975	59.097	1.00 36.49	C
ATOM	6652	O	ASN	A	442	35.399	53.472	58.871	1.00 37.28	O
ATOM	6653	N	LYS	A	443	37.537	53.694	59.570	1.00 37.27	N
ATOM	6655	CA	LYS	A	443	37.443	55.111	59.920	1.00 40.56	C
ATOM	6657	CB	LYS	A	443	38.759	55.895	59.850	1.00 42.83	C
ATOM	6660	CG	LYS	A	443	39.988	55.442	60.495	1.00 45.94	C
ATOM	6663	CD	LYS	A	443	41.237	56.329	60.166	1.00 47.16	C
ATOM	6666	CE	LYS	A	443	42.546	55.495	60.405	1.00 49.15	C
ATOM	6669	NZ	LYS	A	443	43.707	55.709	59.389	1.00 50.56	N
ATOM	6673	C	LYS	A	443	36.582	55.947	58.945	1.00 42.61	C
ATOM	6674	O	LYS	A	443	35.994	56.946	59.344	1.00 44.63	O
ATOM	6675	N	ASN	A	444	36.652	55.608	57.658	1.00 42.59	N
ATOM	6677	CA	ASN	A	444	36.171	56.418	56.545	1.00 44.01	C
ATOM	6679	CB	ASN	A	444	37.294	56.464	55.497	1.00 44.13	C
ATOM	6682	CG	ASN	A	444	38.405	57.361	55.910	1.00 46.10	C
ATOM	6683	OD1	ASN	A	444	38.183	58.301	56.639	1.00 50.68	O
ATOM	6684	ND2	ASN	A	444	39.594	57.100	55.461	1.00 47.38	N
ATOM	6687	C	ASN	A	444	34.921	55.847	55.902	1.00 43.68	C
ATOM	6688	O	ASN	A	444	34.542	56.270	54.825	1.00 45.84	O
ATOM	6689	N	LEU	A	445	34.283	54.866	56.539	1.00 42.24	N
ATOM	6691	CA	LEU	A	445	33.301	54.082	55.849	1.00 41.55	C
ATOM	6693	CB	LEU	A	445	33.208	52.701	56.401	1.00 38.97	C
ATOM	6696	CG	LEU	A	445	32.117	51.924	55.680	1.00 39.43	C
ATOM	6698	CD1	LEU	A	445	32.454	51.904	54.221	1.00 41.08	C
ATOM	6702	CD2	LEU	A	445	31.954	50.485	56.169	1.00 37.35	C
ATOM	6706	C	LEU	A	445	31.995	54.746	56.056	1.00 44.65	C
ATOM	6707	O	LEU	A	445	31.635	55.160	57.193	1.00 46.34	O
ATOM	6708	N	CYS	A	446	31.267	54.879	54.966	1.00 45.65	N
ATOM	6710	CA	CYS	A	446	29.956	55.494	55.049	1.00 47.96	C
ATOM	6712	CB	CYS	A	446	29.980	56.842	54.346	1.00 51.65	C
ATOM	6715	SG	CYS	A	446	30.690	58.223	55.323	1.00 56.94	S
ATOM	6716	C	CYS	A	446	28.930	54.580	54.454	1.00 45.78	C
ATOM	6717	O	CYS	A	446	29.247	53.516	53.948	1.00 45.34	O
ATOM	6718	N	TYR	A	447	27.698	54.972	54.622	1.00 46.60	N
ATOM	6720	CA	TYR	A	447	26.536	54.438	53.926	1.00 46.93	C
ATOM	6722	CB	TYR	A	447	26.727	54.312	52.366	1.00 46.78	C
ATOM	6725	CG	TYR	A	447	27.370	55.536	51.702	1.00 48.48	C
ATOM	6726	CD1	TYR	A	447	28.763	55.661	51.604	1.00 48.29	C
ATOM	6728	CE1	TYR	A	447	29.359	56.796	51.020	1.00 49.65	C
ATOM	6730	CZ	TYR	A	447	28.561	57.823	50.584	1.00 53.33	C
ATOM	6731	OH	TYR	A	447	29.156	58.934	50.022	1.00 56.47	O
ATOM	6733	CE2	TYR	A	447	27.188	57.718	50.684	1.00 52.55	C
ATOM	6735	CD2	TYR	A	447	26.603	56.594	51.237	1.00 50.12	C
ATOM	6737	C	TYR	A	447	26.006	53.182	54.579	1.00 45.12	C
ATOM	6738	O	TYR	A	447	24.828	52.906	54.450	1.00 46.05	O
ATOM	6739	N	ALA	A	448	26.825	52.441	55.307	1.00 42.46	N
ATOM	6741	CA	ALA	A	448	26.412	51.097	55.672	1.00 42.12	C
ATOM	6743	CB	ALA	A	448	27.486	50.466	56.386	1.00 40.08	C
ATOM	6747	C	ALA	A	448	25.164	51.065	56.550	1.00 45.51	C
ATOM	6748	O	ALA	A	448	24.377	50.118	56.546	1.00 46.84	O
ATOM	6749	N	ASN	A	449	25.042	52.116	57.349	1.00 48.30	N
ATOM	6751	CA	ASN	A	449	24.032	52.298	58.385	1.00 50.40	C
ATOM	6753	CB	ASN	A	449	24.550	53.507	59.267	1.00 51.87	C
ATOM	6756	CG	ASN	A	449	24.734	54.895	58.395	1.00 57.64	C

ATOM	6757	OD1	ASN	A	449	25.688	55.006	57.531	1.00 53.24	O
ATOM	6758	ND2	ASN	A	449	23.747	55.920	58.585	1.00 59.18	N
ATOM	6761	C	ASN	A	449	22.672	52.509	57.647	1.00 52.26	C
ATOM	6762	O	ASN	A	449	21.637	52.128	58.077	1.00 53.29	O
ATOM	6763	N	THR	A	450	22.728	53.091	56.469	1.00 53.13	N
ATOM	6765	CA	THR	A	450	21.597	53.268	55.534	1.00 54.99	C
ATOM	6767	CB	THR	A	450	22.266	53.742	54.252	1.00 54.62	C
ATOM	6769	OG1	THR	A	450	22.367	55.152	54.295	1.00 55.61	O
ATOM	6771	CG2	THR	A	450	21.443	53.564	53.124	1.00 57.50	C
ATOM	6775	C	THR	A	450	20.713	52.104	55.065	1.00 55.13	C
ATOM	6776	O	THR	A	450	19.534	52.252	54.725	1.00 57.64	O
ATOM	6777	N	ILE	A	451	21.340	50.971	54.847	1.00 53.09	N
ATOM	6779	CA	ILE	A	451	20.639	49.838	54.231	1.00 52.81	C
ATOM	6781	CB	ILE	A	451	21.672	48.959	53.650	1.00 48.99	C
ATOM	6783	CG1	ILE	A	451	21.964	49.458	52.272	1.00 48.98	C
ATOM	6786	CD1	ILE	A	451	23.287	48.919	51.907	1.00 51.48	C
ATOM	6790	CG2	ILE	A	451	21.238	47.512	53.660	1.00 48.80	C
ATOM	6794	C	ILE	A	451	19.855	49.041	55.251	1.00 53.28	C
ATOM	6795	O	ILE	A	451	20.291	48.882	56.403	1.00 53.75	O
ATOM	6796	N	ASN	A	452	18.729	48.501	54.859	1.00 54.61	N
ATOM	6798	CA	ASN	A	452	18.075	47.564	55.753	1.00 54.85	C
ATOM	6800	CB	ASN	A	452	16.582	47.583	55.595	1.00 58.78	C
ATOM	6803	CG	ASN	A	452	15.898	46.688	56.573	1.00 60.06	C
ATOM	6804	OD1	ASN	A	452	16.477	46.247	57.535	1.00 60.16	O
ATOM	6805	ND2	ASN	A	452	14.630	46.447	56.348	1.00 66.13	N
ATOM	6808	C	ASN	A	452	18.584	46.161	55.514	1.00 51.88	C
ATOM	6809	O	ASN	A	452	18.079	45.429	54.688	1.00 51.93	O
ATOM	6810	N	TRP	A	453	19.574	45.788	56.289	1.00 49.02	N
ATOM	6812	CA	TRP	A	453	20.267	44.509	56.111	1.00 47.00	C
ATOM	6814	CB	TRP	A	453	21.380	44.370	57.080	1.00 43.94	C
ATOM	6817	CG	TRP	A	453	22.510	45.291	56.788	1.00 42.79	C
ATOM	6818	CD1	TRP	A	453	22.646	46.594	57.203	1.00 43.19	C
ATOM	6820	NE1	TRP	A	453	23.832	47.126	56.749	1.00 42.40	N
ATOM	6822	CE2	TRP	A	453	24.515	46.164	56.055	1.00 41.54	C
ATOM	6823	CD2	TRP	A	453	23.706	44.986	56.055	1.00 40.84	C
ATOM	6824	CE3	TRP	A	453	24.181	43.846	55.397	1.00 37.49	C
ATOM	6826	CZ3	TRP	A	453	25.422	43.910	54.728	1.00 36.87	C
ATOM	6828	CH2	TRP	A	453	26.216	45.085	54.767	1.00 37.26	C
ATOM	6830	CZ2	TRP	A	453	25.771	46.226	55.419	1.00 40.29	C
ATOM	6832	C	TRP	A	453	19.210	43.347	56.304	1.00 45.34	C
ATOM	6833	O	TRP	A	453	19.523	42.225	55.960	1.00 48.61	O
ATOM	6834	N	ALA	A	454	18.049	43.569	56.872	1.00 50.12	N
ATOM	6836	CA	ALA	A	454	17.163	42.440	57.046	1.00 52.09	C
ATOM	6838	CB	ALA	A	454	16.100	42.742	58.175	1.00 55.94	C
ATOM	6842	C	ALA	A	454	16.497	41.955	55.731	1.00 52.76	C
ATOM	6843	O	ALA	A	454	16.033	40.830	55.669	1.00 53.28	O
ATOM	6844	N	ALA	A	455	16.438	42.796	54.699	1.00 53.04	N
ATOM	6846	CA	ALA	A	455	15.958	42.371	53.388	1.00 54.61	C
ATOM	6848	CB	ALA	A	455	15.611	43.600	52.415	1.00 55.56	C
ATOM	6852	C	ALA	A	455	17.019	41.447	52.780	1.00 52.15	C
ATOM	6853	O	ALA	A	455	16.713	40.564	51.986	1.00 53.84	O
ATOM	6854	N	LEU	A	456	18.278	41.584	53.144	1.00 48.88	N
ATOM	6856	CA	LEU	A	456	19.207	40.624	52.575	1.00 47.66	C
ATOM	6858	CB	LEU	A	456	20.629	41.111	52.554	1.00 44.76	C
ATOM	6861	CG	LEU	A	456	20.822	42.604	52.299	1.00 47.13	C
ATOM	6863	CD1	LEU	A	456	22.273	42.896	52.676	1.00 47.80	C
ATOM	6867	CD2	LEU	A	456	20.538	43.052	50.860	1.00 46.95	C
ATOM	6871	C	LEU	A	456	19.131	39.306	53.285	1.00 47.43	C
ATOM	6872	O	LEU	A	456	19.433	38.295	52.722	1.00 48.81	O
ATOM	6873	N	PHE	A	457	18.713	39.299	54.520	1.00 48.14	N
ATOM	6875	CA	PHE	A	457	18.752	38.096	55.293	1.00 48.22	C
ATOM	6877	CB	PHE	A	457	18.711	38.449	56.766	1.00 48.21	C
ATOM	6880	CG	PHE	A	457	19.963	39.062	57.277	1.00 44.36	C
ATOM	6881	CD1	PHE	A	457	19.934	39.820	58.425	1.00 44.86	C
ATOM	6883	CE1	PHE	A	457	21.026	40.346	58.984	1.00 42.67	C
ATOM	6885	CZ	PHE	A	457	22.226	40.151	58.400	1.00 43.38	C
ATOM	6887	CE2	PHE	A	457	22.294	39.405	57.247	1.00 43.86	C
ATOM	6889	CD2	PHE	A	457	21.148	38.843	56.690	1.00 42.41	C

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ATOM 6891  C   PHE A 457     17.647  37.119  54.932  1.00 51.40           C
ATOM 6892  O   PHE A 457     16.662  37.500  54.357  1.00 52.54           O
ATOM 6893  N   GLY A 458     17.898  35.854  55.274  1.00 52.35           N
ATOM 6895  CA  GLY A 458     17.023  34.744  55.030  1.00 56.05           C
ATOM 6898  C   GLY A 458     16.661  33.924  56.238  1.00 58.52           C
ATOM 6899  O   GLY A 458     15.591  33.315  56.320  1.00 63.06           O
ATOM 6900  N   THR A 459     17.597  33.823  57.145  1.00 57.90           N
ATOM 6902  CA  THR A 459     17.361  33.198  58.447  1.00 60.11           C
ATOM 6904  CB  THR A 459     18.698  32.524  59.028  1.00 58.33           C
ATOM 6906  OG1 THR A 459     19.443  31.758  58.027  1.00 56.59           O
ATOM 6908  CG2 THR A 459     18.397  31.515  60.156  1.00 61.86           C
ATOM 6912  C   THR A 459     16.973  34.339  59.362  1.00 60.43           C
ATOM 6913  O   THR A 459     17.504  35.455  59.293  1.00 58.76           O
ATOM 6914  N   SER A 460     16.055  34.063  60.248  1.00 63.77           N
ATOM 6916  CA  SER A 460     15.832  34.971  61.348  1.00 64.47           C
ATOM 6918  CB  SER A 460     14.427  34.808  61.931  1.00 69.15           C
ATOM 6921  OG  SER A 460     14.550  34.108  63.143  1.00 71.63           O
ATOM 6923  C   SER A 460     16.934  34.647  62.384  1.00 62.22           C
ATOM 6924  O   SER A 460     17.590  33.555  62.356  1.00 61.49           O
ATOM 6925  N   GLY A 461     17.164  35.602  63.277  1.00 60.59           N
ATOM 6927  CA  GLY A 461     18.316  35.494  64.123  1.00 57.63           C
ATOM 6930  C   GLY A 461     19.585  35.989  63.511  1.00 52.41           C
ATOM 6931  O   GLY A 461     20.446  36.242  64.286  1.00 52.50           O
ATOM 6932  N   GLN A 462     19.741  36.137  62.195  1.00 49.52           N
ATOM 6934  CA  GLN A 462     20.925  36.822  61.668  1.00 45.64           C
ATOM 6936  CB  GLN A 462     20.952  36.897  60.163  1.00 43.36           C
ATOM 6939  CG  GLN A 462     21.317  35.605  59.465  1.00 43.36           C
ATOM 6942  CD  GLN A 462     21.144  35.662  57.939  1.00 42.21           C
ATOM 6943  OE1 GLN A 462     20.022  35.477  57.420  1.00 43.94           O
ATOM 6944  NE2 GLN A 462     22.221  35.915  57.237  1.00 38.31           N
ATOM 6947  C   GLN A 462     21.059  38.245  62.227  1.00 46.14           C
ATOM 6948  O   GLN A 462     20.063  38.974  62.410  1.00 47.92           O
ATOM 6949  N   LYS A 463     22.288  38.625  62.523  1.00 44.23           N
ATOM 6951  CA  LYS A 463     22.533  39.895  63.147  1.00 45.46           C
ATOM 6953  CB  LYS A 463     23.017  39.668  64.596  1.00 46.79           C
ATOM 6956  CG  LYS A 463     21.984  38.954  65.430  1.00 55.05           C
ATOM 6959  CD  LYS A 463     22.139  39.020  67.026  1.00 59.62           C
ATOM 6962  CE  LYS A 463     20.716  38.916  67.717  1.00 64.36           C
ATOM 6965  NZ  LYS A 463     20.821  38.672  69.237  1.00 69.48           N
ATOM 6969  C   LYS A 463     23.603  40.691  62.389  1.00 42.96           C
ATOM 6970  O   LYS A 463     24.382  40.166  61.581  1.00 39.97           O
ATOM 6971  N   THR A 464     23.730  41.932  62.818  1.00 43.35           N
ATOM 6973  CA  THR A 464     24.580  42.878  62.188  1.00 42.23           C
ATOM 6975  CB  THR A 464     23.583  43.748  61.509  1.00 44.72           C
ATOM 6977  OG1 THR A 464     23.198  43.095  60.276  1.00 46.76           O
ATOM 6979  CG2 THR A 464     24.182  45.089  61.116  1.00 46.18           C
ATOM 6983  C   THR A 464     25.331  43.693  63.198  1.00 41.03           C
ATOM 6984  O   THR A 464     24.720  44.166  64.099  1.00 43.87           O
ATOM 6985  N   LYS A 465     26.616  43.918  63.032  1.00 38.29           N
ATOM 6987  CA  LYS A 465     27.350  44.883  63.862  1.00 37.96           C
ATOM 6989  CB  LYS A 465     28.365  44.234  64.770  1.00 38.00           C
ATOM 6992  CG  LYS A 465     27.843  43.601  66.020  1.00 39.95           C
ATOM 6995  CD  LYS A 465     29.041  42.928  66.733  1.00 39.30           C
ATOM 6998  CE  LYS A 465     28.550  41.917  67.693  1.00 43.12           C
ATOM 7001  NZ  LYS A 465     29.446  41.823  68.859  1.00 47.34           N
ATOM 7005  C   LYS A 465     28.107  45.855  62.997  1.00 35.71           C
ATOM 7006  O   LYS A 465     29.066  45.520  62.377  1.00 34.33           O
ATOM 7007  N   ILE A 466     27.686  47.083  63.039  1.00 36.59           N
ATOM 7009  CA  ILE A 466     28.230  48.113  62.287  1.00 36.36           C
ATOM 7011  CB  ILE A 466     27.149  48.658  61.458  1.00 37.62           C
ATOM 7013  CG1 ILE A 466     26.638  47.521  60.575  1.00 39.37           C
ATOM 7016  CD1 ILE A 466     25.425  47.855  59.830  1.00 43.42           C
ATOM 7020  CG2 ILE A 466     27.645  49.806  60.602  1.00 36.38           C
ATOM 7024  C   ILE A 466     28.660  49.060  63.328  1.00 39.00           C
ATOM 7025  O   ILE A 466     27.884  49.879  63.803  1.00 42.79           O
ATOM 7026  N   ILE A 467     29.957  49.024  63.565  1.00 39.11           N
ATOM 7028  CA  ILE A 467     30.596  49.432  64.779  1.00 40.37           C
ATOM 7030  CB  ILE A 467     31.219  48.212  65.331  1.00 40.16           C
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ATOM	7032	CG1	ILE	A	467	30.370	47.332	66.163	1.00	42.73	C
ATOM	7035	CD1	ILE	A	467	31.377	45.982	66.241	1.00	40.48	C
ATOM	7039	CG2	ILE	A	467	32.262	48.549	66.279	1.00	45.19	C
ATOM	7043	C	ILE	A	467	31.840	50.203	64.366	1.00	39.14	C
ATOM	7044	O	ILE	A	467	32.618	49.668	63.547	1.00	36.89	O
ATOM	7045	N	SER	A	468	32.116	51.332	65.040	1.00	40.22	N
ATOM	7047	CA	SER	A	468	33.370	52.094	64.911	1.00	39.83	C
ATOM	7049	CB	SER	A	468	34.462	51.450	65.689	1.00	40.10	C
ATOM	7052	OG	SER	A	468	35.683	52.125	65.536	1.00	44.57	O
ATOM	7054	C	SER	A	468	33.775	52.258	63.472	1.00	38.05	C
ATOM	7055	O	SER	A	468	34.825	51.854	63.028	1.00	35.32	O
ATOM	7056	N	ASN	A	469	32.855	52.838	62.716	1.00	39.19	N
ATOM	7058	CA	ASN	A	469	33.116	53.297	61.394	1.00	38.06	C
ATOM	7060	CB	ASN	A	469	32.120	52.660	60.473	1.00	37.00	C
ATOM	7063	CG	ASN	A	469	32.229	51.158	60.463	1.00	32.67	C
ATOM	7064	OD1	ASN	A	469	33.227	50.572	60.068	1.00	31.21	O
ATOM	7065	ND2	ASN	A	469	31.183	50.536	60.930	1.00	33.32	N
ATOM	7068	C	ASN	A	469	33.072	54.801	61.447	1.00	40.14	C
ATOM	7069	O	ASN	A	469	33.215	55.332	62.487	1.00	41.27	O
ATOM	7070	N	ARG	A	470	32.989	55.479	60.332	1.00	42.08	N
ATOM	7072	CA	ARG	A	470	32.665	56.891	60.330	1.00	46.67	C
ATOM	7074	CB	ARG	A	470	32.810	57.409	58.920	1.00	47.34	C
ATOM	7077	CG	ARG	A	470	32.742	58.880	58.850	1.00	52.09	C
ATOM	7080	CD	ARG	A	470	34.050	59.464	58.571	1.00	55.79	C
ATOM	7083	NE	ARG	A	470	33.944	60.651	57.785	1.00	61.59	N
ATOM	7085	CZ	ARG	A	470	34.946	61.179	57.104	1.00	64.65	C
ATOM	7086	NH1	ARG	A	470	36.169	60.602	57.129	1.00	61.27	N
ATOM	7089	NH2	ARG	A	470	34.710	62.300	56.374	1.00	67.54	N
ATOM	7092	C	ARG	A	470	31.205	57.060	60.710	1.00	49.51	C
ATOM	7093	O	ARG	A	470	30.334	56.385	60.116	1.00	51.46	O
ATOM	7094	N	GLY	A	471	30.864	57.940	61.623	1.00	52.32	N
ATOM	7096	CA	GLY	A	471	29.444	58.051	61.999	1.00	54.41	C
ATOM	7099	C	GLY	A	471	28.409	58.690	61.044	1.00	56.89	C
ATOM	7100	O	GLY	A	471	28.771	59.570	60.204	1.00	58.19	O
ATOM	7101	N	ALA	A	472	27.117	58.276	61.201	1.00	57.50	N
ATOM	7103	CA	ALA	A	472	25.991	58.836	60.402	1.00	59.48	C
ATOM	7105	CB	ALA	A	472	24.529	58.422	60.926	1.00	59.82	C
ATOM	7109	C	ALA	A	472	26.180	60.340	60.361	1.00	62.54	C
ATOM	7110	O	ALA	A	472	25.935	60.936	59.337	1.00	64.71	O
ATOM	7111	N	ASN	A	473	26.709	60.910	61.448	1.00	63.09	N
ATOM	7113	CA	ASN	A	473	26.888	62.359	61.610	1.00	66.39	C
ATOM	7115	CB	ASN	A	473	27.229	62.615	63.117	1.00	67.84	C
ATOM	7118	CG	ASN	A	473	27.465	64.101	63.481	1.00	71.47	C
ATOM	7119	OD1	ASN	A	473	28.533	64.653	63.201	1.00	72.56	O
ATOM	7120	ND2	ASN	A	473	26.517	64.702	64.181	1.00	70.68	N
ATOM	7123	C	ASN	A	473	27.912	62.992	60.665	1.00	66.37	C
ATOM	7124	O	ASN	A	473	27.616	63.960	60.011	1.00	68.02	O
ATOM	7125	N	ALA	A	474	29.133	62.452	60.621	1.00	65.12	N
ATOM	7127	CA	ALA	A	474	30.220	63.060	59.830	1.00	65.88	C
ATOM	7129	CB	ALA	A	474	31.554	62.342	60.019	1.00	62.40	C
ATOM	7133	C	ALA	A	474	29.778	62.956	58.411	1.00	66.42	C
ATOM	7134	O	ALA	A	474	29.829	63.943	57.670	1.00	69.09	O
ATOM	7135	N	CYS	A	475	29.294	61.756	58.068	1.00	64.28	N
ATOM	7137	CA	CYS	A	475	28.846	61.446	56.715	1.00	64.60	C
ATOM	7139	CB	CYS	A	475	28.276	60.046	56.655	1.00	61.39	C
ATOM	7142	SG	CYS	A	475	29.609	58.840	57.005	1.00	61.67	S
ATOM	7143	C	CYS	A	475	27.823	62.441	56.247	1.00	68.38	C
ATOM	7144	O	CYS	A	475	27.945	62.918	55.133	1.00	70.86	O
ATOM	7145	N	ALA	A	476	26.839	62.773	57.096	1.00	69.69	N
ATOM	7147	CA	ALA	A	476	25.738	63.659	56.708	1.00	73.44	C
ATOM	7149	CB	ALA	A	476	24.512	63.632	57.733	1.00	74.87	C
ATOM	7153	C	ALA	A	476	26.315	65.042	56.588	1.00	76.96	C
ATOM	7154	O	ALA	A	476	25.922	65.815	55.746	1.00	80.28	O
ATOM	7155	N	ALA	A	477	27.284	65.326	57.441	1.00	76.83	N
ATOM	7157	CA	ALA	A	477	27.946	66.610	57.480	1.00	79.93	C
ATOM	7159	CB	ALA	A	477	28.692	66.746	58.841	1.00	79.17	C
ATOM	7163	C	ALA	A	477	28.883	66.854	56.259	1.00	80.17	C
ATOM	7164	O	ALA	A	477	29.420	67.924	56.119	1.00	83.71	O

ATOM	7165	N	THR	A	478	29.061	65.887	55.367	1.00	77.44	N
ATOM	7167	CA	THR	A	478	29.857	66.103	54.148	1.00	78.09	C
ATOM	7169	CB	THR	A	478	31.207	65.328	54.184	1.00	74.61	C
ATOM	7171	OG1	THR	A	478	31.657	65.181	55.522	1.00	72.75	O
ATOM	7173	CG2	THR	A	478	32.284	66.181	53.526	1.00	77.14	C
ATOM	7177	C	THR	A	478	29.159	65.664	52.870	1.00	77.93	C
ATOM	7178	O	THR	A	478	29.821	65.477	51.834	1.00	78.45	O
ATOM	7179	N	GLY	A	479	27.857	65.436	52.920	1.00	77.46	N
ATOM	7181	CA	GLY	A	479	27.162	64.913	51.748	1.00	77.03	C
ATOM	7184	C	GLY	A	479	27.510	63.493	51.309	1.00	71.99	C
ATOM	7185	O	GLY	A	479	27.172	63.096	50.232	1.00	71.57	O
ATOM	7186	N	GLN	A	480	28.197	62.715	52.127	1.00	68.57	N
ATOM	7188	CA	GLN	A	480	28.453	61.317	51.786	1.00	64.64	C
ATOM	7190	CB	GLN	A	480	29.784	60.854	52.334	1.00	61.62	C
ATOM	7193	CG	GLN	A	480	30.980	61.814	52.059	1.00	64.83	C
ATOM	7196	CD	GLN	A	480	32.316	61.198	52.592	1.00	64.82	C
ATOM	7197	OE1	GLN	A	480	32.487	61.054	53.819	1.00	64.21	O
ATOM	7198	NE2	GLN	A	480	33.224	60.787	51.671	1.00	62.23	N
ATOM	7201	C	GLN	A	480	27.227	60.525	52.300	1.00	63.37	C
ATOM	7202	O	GLN	A	480	27.260	59.788	53.314	1.00	61.12	O
ATOM	7203	N	VAL	A	481	26.162	60.692	51.514	1.00	64.68	N
ATOM	7205	CA	VAL	A	481	24.809	60.368	51.872	1.00	65.06	C
ATOM	7207	CB	VAL	A	481	24.167	61.693	52.392	1.00	69.11	C
ATOM	7209	CG1	VAL	A	481	22.737	61.873	51.999	1.00	71.00	C
ATOM	7213	CG2	VAL	A	481	24.349	61.727	53.885	1.00	68.55	C
ATOM	7217	C	VAL	A	481	24.142	59.795	50.629	1.00	65.55	C
ATOM	7218	O	VAL	A	481	24.589	60.047	49.535	1.00	66.48	O
ATOM	7219	N	CYS	A	482	23.053	59.055	50.768	1.00	69.26	N
ATOM	7221	CA	CYS	A	482	22.381	58.508	49.580	1.00	68.72	C
ATOM	7223	CB	CYS	A	482	21.207	57.639	49.988	1.00	67.54	C
ATOM	7226	SG	CYS	A	482	21.874	56.056	50.630	1.00	70.71	S
ATOM	7227	C	CYS	A	482	21.898	59.552	48.623	1.00	69.13	C
ATOM	7228	O	CYS	A	482	21.270	60.487	49.030	1.00	70.33	O
ATOM	7229	N	HIS	A	483	22.230	59.344	47.354	1.00	68.81	N
ATOM	7231	CA	HIS	A	483	21.865	60.191	46.211	1.00	69.88	C
ATOM	7233	CB	HIS	A	483	22.206	59.481	44.903	1.00	68.48	C
ATOM	7236	CG	HIS	A	483	22.273	60.355	43.700	1.00	69.95	C
ATOM	7237	ND1	HIS	A	483	23.344	60.319	42.843	1.00	71.52	N
ATOM	7239	CE1	HIS	A	483	23.138	61.154	41.840	1.00	72.59	C
ATOM	7241	NE2	HIS	A	483	21.952	61.697	41.998	1.00	71.71	N
ATOM	7243	CD2	HIS	A	483	21.383	61.207	43.144	1.00	70.25	C
ATOM	7245	C	HIS	A	483	20.394	60.442	46.219	1.00	70.55	C
ATOM	7246	O	HIS	A	483	19.633	59.603	46.639	1.00	69.08	O
ATOM	7247	N	ALA	A	484	20.033	61.644	45.777	1.00	73.54	N
ATOM	7249	CA	ALA	A	484	18.667	62.058	45.466	1.00	74.84	C
ATOM	7251	CB	ALA	A	484	18.715	63.282	44.604	1.00	77.22	C
ATOM	7255	C	ALA	A	484	17.804	60.997	44.766	1.00	73.78	C
ATOM	7256	O	ALA	A	484	16.634	60.816	45.150	1.00	74.54	O
ATOM	7257	N	LEU	A	485	18.360	60.294	43.758	1.00	72.45	N
ATOM	7259	CA	LEU	A	485	17.549	59.450	42.876	1.00	70.78	C
ATOM	7261	CB	LEU	A	485	18.233	59.189	41.526	1.00	69.85	C
ATOM	7264	CG	LEU	A	485	18.417	60.352	40.554	1.00	71.18	C
ATOM	7266	CD1	LEU	A	485	19.226	59.942	39.360	1.00	68.77	C
ATOM	7270	CD2	LEU	A	485	17.087	60.885	40.150	1.00	71.99	C
ATOM	7274	C	LEU	A	485	17.292	58.146	43.572	1.00	68.77	C
ATOM	7275	O	LEU	A	485	16.758	57.226	42.968	1.00	67.85	O
ATOM	7276	N	CYS	A	486	17.658	58.059	44.846	1.00	68.16	N
ATOM	7278	CA	CYS	A	486	17.418	56.844	45.588	1.00	66.85	C
ATOM	7280	CB	CYS	A	486	18.531	56.547	46.571	1.00	66.88	C
ATOM	7283	SG	CYS	A	486	20.068	56.462	45.781	1.00	68.62	S
ATOM	7284	C	CYS	A	486	16.216	56.889	46.426	1.00	66.34	C
ATOM	7285	O	CYS	A	486	15.944	57.829	47.074	1.00	66.83	O
ATOM	7286	N	SER	A	487	15.563	55.767	46.427	1.00	65.87	N
ATOM	7288	CA	SER	A	487	14.601	55.373	47.382	1.00	67.61	C
ATOM	7290	CB	SER	A	487	14.455	53.894	47.096	1.00	66.72	C
ATOM	7293	OG	SER	A	487	13.753	53.245	48.093	1.00	71.71	O
ATOM	7295	C	SER	A	487	15.053	55.580	48.835	1.00	68.27	C
ATOM	7296	O	SER	A	487	16.270	55.700	49.159	1.00	68.64	O

ATOM	7297	N	PRO	A	488	14.094	55.577	49.752	1.00 69.67	N
ATOM	7298	CA	PRO	A	488	14.443	55.564	51.181	1.00 69.32	C
ATOM	7300	CB	PRO	A	488	13.149	56.052	51.860	1.00 71.17	C
ATOM	7303	CG	PRO	A	488	12.071	55.622	50.953	1.00 72.01	C
ATOM	7306	CD	PRO	A	488	12.636	55.635	49.538	1.00 71.29	C
ATOM	7309	C	PRO	A	488	14.869	54.179	51.626	1.00 67.39	C
ATOM	7310	O	PRO	A	488	14.883	53.915	52.804	1.00 67.71	O
ATOM	7311	N	GLU	A	489	15.262	53.315	50.688	1.00 66.05	N
ATOM	7313	CA	GLU	A	489	15.650	51.931	50.990	1.00 64.34	C
ATOM	7315	CB	GLU	A	489	14.944	51.012	49.979	1.00 64.65	C
ATOM	7318	CG	GLU	A	489	13.950	49.987	50.564	1.00 66.51	C
ATOM	7321	CD	GLU	A	489	13.583	48.907	49.525	1.00 69.58	C
ATOM	7322	OE1	GLU	A	489	13.820	47.707	49.835	1.00 69.93	O
ATOM	7323	OE2	GLU	A	489	13.131	49.249	48.381	1.00 70.48	O
ATOM	7324	C	GLU	A	489	17.197	51.761	50.970	1.00 62.02	C
ATOM	7325	O	GLU	A	489	17.725	50.641	50.992	1.00 60.23	O
ATOM	7326	N	GLY	A	490	17.902	52.885	50.883	1.00 61.19	N
ATOM	7328	CA	GLY	A	490	19.311	52.942	51.176	1.00 60.24	C
ATOM	7331	C	GLY	A	490	20.262	52.839	50.001	1.00 59.52	C
ATOM	7332	O	GLY	A	490	19.800	52.615	48.891	1.00 59.65	O
ATOM	7333	N	CYS	A	491	21.577	52.973	50.241	1.00 58.69	N
ATOM	7335	CA	CYS	A	491	22.579	52.834	49.190	1.00 58.30	C
ATOM	7337	CB	CYS	A	491	23.088	54.159	48.688	1.00 59.18	C
ATOM	7340	SG	CYS	A	491	23.678	55.247	49.964	1.00 59.51	S
ATOM	7341	C	CYS	A	491	23.768	52.133	49.698	1.00 58.17	C
ATOM	7342	O	CYS	A	491	23.906	52.025	50.870	1.00 60.09	O
ATOM	7343	N	TRP	A	492	24.644	51.722	48.785	1.00 57.47	N
ATOM	7345	CA	TRP	A	492	25.960	51.157	49.054	1.00 57.58	C
ATOM	7347	CB	TRP	A	492	26.198	49.914	48.208	1.00 57.23	C
ATOM	7350	CG	TRP	A	492	25.251	48.846	48.427	1.00 56.66	C
ATOM	7351	CD1	TRP	A	492	24.125	48.616	47.769	1.00 56.12	C
ATOM	7353	NE1	TRP	A	492	23.504	47.505	48.257	1.00 56.13	N
ATOM	7355	CE2	TRP	A	492	24.257	47.030	49.275	1.00 56.67	C
ATOM	7356	CD2	TRP	A	492	25.367	47.843	49.384	1.00 56.95	C
ATOM	7357	CE3	TRP	A	492	26.323	47.539	50.332	1.00 57.68	C
ATOM	7359	CZ3	TRP	A	492	26.133	46.504	51.114	1.00 58.09	C
ATOM	7361	CH2	TRP	A	492	25.012	45.719	50.987	1.00 57.91	C
ATOM	7363	CZ2	TRP	A	492	24.068	45.969	50.056	1.00 57.20	C
ATOM	7365	C	TRP	A	492	26.997	52.155	48.596	1.00 58.58	C
ATOM	7366	O	TRP	A	492	28.023	51.764	48.120	1.00 59.09	O
ATOM	7367	N	GLY	A	493	26.736	53.443	48.717	1.00 59.23	N
ATOM	7369	CA	GLY	A	493	27.504	54.415	48.045	1.00 60.57	C
ATOM	7372	C	GLY	A	493	26.905	55.667	47.512	1.00 61.34	C
ATOM	7373	O	GLY	A	493	25.700	55.817	47.542	1.00 60.80	O
ATOM	7374	N	PRO	A	494	27.715	56.602	47.067	1.00 63.04	N
ATOM	7375	CA	PRO	A	494	27.223	57.926	46.798	1.00 65.24	C
ATOM	7377	CB	PRO	A	494	28.514	58.706	46.562	1.00 67.15	C
ATOM	7380	CG	PRO	A	494	29.467	57.738	46.091	1.00 66.26	C
ATOM	7383	CD	PRO	A	494	29.148	56.516	46.802	1.00 64.20	C
ATOM	7386	C	PRO	A	494	26.328	57.929	45.573	1.00 66.33	C
ATOM	7387	O	PRO	A	494	25.317	58.597	45.559	1.00 68.00	O
ATOM	7388	N	GLU	A	495	26.684	57.109	44.592	1.00 66.87	N
ATOM	7390	CA	GLU	A	495	26.191	57.194	43.228	1.00 67.29	C
ATOM	7392	CB	GLU	A	495	27.262	56.599	42.343	1.00 67.64	C
ATOM	7395	CG	GLU	A	495	28.401	57.573	42.148	1.00 71.68	C
ATOM	7398	CD	GLU	A	495	29.577	56.927	41.440	1.00 76.82	C
ATOM	7399	OE1	GLU	A	495	29.470	55.740	40.951	1.00 75.08	O
ATOM	7400	OE2	GLU	A	495	30.632	57.625	41.377	1.00 82.21	O
ATOM	7401	C	GLU	A	495	24.837	56.544	42.919	1.00 65.80	C
ATOM	7402	O	GLU	A	495	24.367	55.692	43.676	1.00 63.46	O
ATOM	7403	N	PRO	A	496	24.192	56.963	41.810	1.00 67.18	N
ATOM	7404	CA	PRO	A	496	22.872	56.413	41.435	1.00 65.83	C
ATOM	7406	CB	PRO	A	496	22.428	57.256	40.256	1.00 66.55	C
ATOM	7409	CG	PRO	A	496	23.607	57.978	39.815	1.00 69.03	C
ATOM	7412	CD	PRO	A	496	24.636	58.013	40.872	1.00 69.18	C
ATOM	7415	C	PRO	A	496	22.869	54.918	41.127	1.00 64.10	C
ATOM	7416	O	PRO	A	496	21.872	54.322	41.478	1.00 64.50	O
ATOM	7417	N	ARG	A	497	23.927	54.318	40.585	1.00 63.43	N

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ATOM 7419  CA  ARG A 497      23.998  52.856  40.554  1.00 61.81           C
ATOM 7421  CB  ARG A 497      25.102  52.371  39.600  1.00 62.79           C
ATOM 7424  CG  ARG A 497      26.384  53.144  39.609  1.00 64.56           C
ATOM 7427  CD  ARG A 497      27.644  52.336  39.155  1.00 65.35           C
ATOM 7430  NE  ARG A 497      28.741  52.771  40.030  1.00 68.46           N
ATOM 7432  CZ  ARG A 497      30.025  52.441  39.960  1.00 68.79           C
ATOM 7433  NH1 ARG A 497      30.472  51.636  39.000  1.00 68.43           N
ATOM 7436  NH2 ARG A 497      30.864  52.943  40.888  1.00 69.25           N
ATOM 7439  C   ARG A 497      24.213  52.199  41.913  1.00 60.94           C
ATOM 7440  O   ARG A 497      24.213  50.997  42.032  1.00 60.39           O
ATOM 7441  N   ASP A 498      24.436  52.990  42.939  1.00 61.84           N
ATOM 7443  CA  ASP A 498      24.624  52.484  44.285  1.00 60.98           C
ATOM 7445  CB  ASP A 498      25.579  53.410  45.067  1.00 62.53           C
ATOM 7448  CG  ASP A 498      27.019  53.424  44.503  1.00 62.37           C
ATOM 7449  OD1 ASP A 498      27.333  52.507  43.754  1.00 63.21           O
ATOM 7450  OD2 ASP A 498      27.902  54.266  44.765  1.00 61.45           O
ATOM 7451  C   ASP A 498      23.314  52.291  45.059  1.00 60.30           C
ATOM 7452  O   ASP A 498      23.324  51.685  46.104  1.00 58.31           O
ATOM 7453  N   CYS A 499      22.172  52.740  44.543  1.00 61.23           N
ATOM 7455  CA  CYS A 499      20.943  52.486  45.291  1.00 61.84           C
ATOM 7457  CB  CYS A 499      19.812  53.357  44.872  1.00 62.74           C
ATOM 7460  SG  CYS A 499      20.331  54.978  44.411  1.00 66.84           S
ATOM 7461  C   CYS A 499      20.433  51.076  45.244  1.00 61.36           C
ATOM 7462  O   CYS A 499      20.878  50.243  44.460  1.00 61.72           O
ATOM 7463  N   VAL A 500      19.488  50.844  46.136  1.00 61.48           N
ATOM 7465  CA  VAL A 500      18.869  49.574  46.344  1.00 61.04           C
ATOM 7467  CB  VAL A 500      18.561  49.388  47.868  1.00 61.98           C
ATOM 7469  CG1 VAL A 500      17.793  48.079  48.131  1.00 63.20           C
ATOM 7473  CG2 VAL A 500      19.840  49.433  48.728  1.00 60.20           C
ATOM 7477  C   VAL A 500      17.588  49.573  45.554  1.00 61.08           C
ATOM 7478  O   VAL A 500      17.157  48.532  45.141  1.00 61.21           O
ATOM 7479  N   SER A 501      16.978  50.746  45.391  1.00 61.78           N
ATOM 7481  CA  SER A 501      15.715  50.963  44.651  1.00 62.67           C
ATOM 7483  CB  SER A 501      14.496  50.409  45.457  1.00 63.41           C
ATOM 7486  OG  SER A 501      14.295  50.992  46.745  1.00 62.89           O
ATOM 7488  C   SER A 501      15.580  52.495  44.276  1.00 64.49           C
ATOM 7489  O   SER A 501      16.205  53.346  44.915  1.00 65.53           O
ATOM 7490  N   CYS A 502      14.796  52.870  43.271  1.00 65.42           N
ATOM 7492  CA  CYS A 502      14.828  54.267  42.789  1.00 67.75           C
ATOM 7494  CB  CYS A 502      14.718  54.264  41.279  1.00 67.77           C
ATOM 7497  SG  CYS A 502      16.221  53.363  40.726  1.00 74.29           S
ATOM 7498  C   CYS A 502      13.720  55.123  43.312  1.00 68.44           C
ATOM 7499  O   CYS A 502      12.717  54.556  43.656  1.00 69.58           O
ATOM 7500  N   ALA A 503      13.838  56.455  43.368  1.00 68.92           N
ATOM 7502  CA  ALA A 503      12.653  57.227  43.798  1.00 71.83           C
ATOM 7504  CB  ALA A 503      12.941  58.787  44.045  1.00 73.74           C
ATOM 7508  C   ALA A 503      11.611  57.004  42.683  1.00 72.91           C
ATOM 7509  O   ALA A 503      10.457  56.658  42.934  1.00 72.96           O
ATOM 7510  N   ASN A 504      12.089  57.121  41.445  1.00 72.99           N
ATOM 7512  CA  ASN A 504      11.256  57.123  40.243  1.00 74.36           C
ATOM 7514  CB  ASN A 504      11.575  58.361  39.406  1.00 75.32           C
ATOM 7517  CG  ASN A 504      11.494  59.602  40.235  1.00 78.00           C
ATOM 7518  OD1 ASN A 504      10.412  60.228  40.359  1.00 82.73           O
ATOM 7519  ND2 ASN A 504      12.596  59.937  40.899  1.00 75.00           N
ATOM 7522  C   ASN A 504      11.434  55.846  39.457  1.00 73.02           C
ATOM 7523  O   ASN A 504      10.662  54.873  39.645  1.00 72.93           O
ATOM 7524  N   VAL A 505      12.501  55.828  38.644  1.00 72.34           N
ATOM 7526  CA  VAL A 505      12.729  54.790  37.645  1.00 70.30           C
ATOM 7528  CB  VAL A 505      12.389  55.347  36.278  1.00 71.79           C
ATOM 7530  CG1 VAL A 505      12.524  54.251  35.263  1.00 71.94           C
ATOM 7534  CG2 VAL A 505      11.011  55.987  36.245  1.00 72.79           C
ATOM 7538  C   VAL A 505      14.158  54.374  37.502  1.00 67.81           C
ATOM 7539  O   VAL A 505      15.046  55.143  37.612  1.00 68.17           O
ATOM 7540  N   SER A 506      14.376  53.149  37.128  1.00 66.94           N
ATOM 7542  CA  SER A 506      15.736  52.664  36.881  1.00 65.51           C
ATOM 7544  CB  SER A 506      15.987  51.363  37.643  1.00 63.70           C
ATOM 7547  OG  SER A 506      14.880  50.489  37.521  1.00 63.05           O
ATOM 7549  C   SER A 506      15.894  52.410  35.406  1.00 65.47           C
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ATOM 7550  O   SER A 506      14.922  52.084  34.730  1.00 65.31           O
ATOM 7551  N   ARG A 507      17.104  52.648  34.920  1.00 66.02           N
ATOM 7553  CA  ARG A 507      17.563  52.198  33.606  1.00 66.52           C
ATOM 7555  CB  ARG A 507      18.321  53.306  32.922  1.00 67.29           C
ATOM 7558  CG  ARG A 507      18.520  53.085  31.458  1.00 67.04           C
ATOM 7561  CD  ARG A 507      19.211  54.254  30.845  1.00 69.49           C
ATOM 7564  NE  ARG A 507      18.350  55.355  30.381  1.00 72.58           N
ATOM 7566  CZ  ARG A 507      18.876  56.525  29.999  1.00 77.80           C
ATOM 7567  NH1 ARG A 507      20.241  56.684  30.043  1.00 76.65           N
ATOM 7570  NH2 ARG A 507      18.076  57.514  29.521  1.00 79.53           N
ATOM 7573  C   ARG A 507      18.500  51.002  33.751  1.00 66.50           C
ATOM 7574  O   ARG A 507      19.747  51.161  33.656  1.00 66.13           O
ATOM 7575  N   GLY A 508      17.900  49.833  34.047  1.00 66.65           N
ATOM 7577  CA  GLY A 508      18.644  48.603  34.086  1.00 65.74           C
ATOM 7580  C   GLY A 508      19.525  48.460  35.303  1.00 65.94           C
ATOM 7581  O   GLY A 508      19.625  47.337  35.840  1.00 66.96           O
ATOM 7582  N   ARG A 509      20.223  49.516  35.730  1.00 66.56           N
ATOM 7584  CA  ARG A 509      21.083  49.445  36.964  1.00 66.64           C
ATOM 7586  CB  ARG A 509      22.489  48.881  36.701  1.00 66.71           C
ATOM 7589  CG  ARG A 509      23.298  49.663  35.556  1.00 69.61           C
ATOM 7592  CD  ARG A 509      23.416  48.867  34.185  1.00 70.79           C
ATOM 7595  NE  ARG A 509      24.374  49.468  33.244  1.00 73.28           N
ATOM 7597  CZ  ARG A 509      25.628  48.985  32.971  1.00 75.15           C
ATOM 7598  NH1 ARG A 509      26.131  47.881  33.569  1.00 71.78           N
ATOM 7601  NH2 ARG A 509      26.402  49.636  32.074  1.00 77.07           N
ATOM 7604  C   ARG A 509      21.264  50.782  37.627  1.00 66.73           C
ATOM 7605  O   ARG A 509      21.410  50.847  38.811  1.00 67.34           O
ATOM 7606  N   GLU A 510      21.297  51.853  36.858  1.00 67.08           N
ATOM 7608  CA  GLU A 510      21.459  53.183  37.434  1.00 67.32           C
ATOM 7610  CB  GLU A 510      22.246  54.101  36.478  1.00 68.74           C
ATOM 7613  CG  GLU A 510      21.936  55.585  36.586  1.00 70.35           C
ATOM 7616  CD  GLU A 510      22.933  56.425  35.809  1.00 74.79           C
ATOM 7617  OE1 GLU A 510      23.986  55.840  35.426  1.00 74.61           O
ATOM 7618  OE2 GLU A 510      22.658  57.652  35.572  1.00 77.88           O
ATOM 7619  C   GLU A 510      20.078  53.729  37.693  1.00 66.81           C
ATOM 7620  O   GLU A 510      19.137  53.401  36.977  1.00 66.94           O
ATOM 7622  N   CYS A 511      19.959  54.554  38.719  1.00 66.39           N
ATOM 7623  CA  CYS A 511      18.693  55.135  39.066  1.00 66.14           C
ATOM 7625  CB  CYS A 511      18.610  55.343  40.548  1.00 65.95           C
ATOM 7628  SG  CYS A 511      18.154  53.799  41.363  1.00 62.99           S
ATOM 7629  C   CYS A 511      18.661  56.414  38.318  1.00 68.45           C
ATOM 7630  O   CYS A 511      19.671  57.145  38.275  1.00 69.88           O
ATOM 7631  N   VAL A 512      17.519  56.652  37.670  1.00 69.26           N
ATOM 7633  CA  VAL A 512      17.284  57.840  36.860  1.00 71.01           C
ATOM 7635  CB  VAL A 512      17.364  57.499  35.357  1.00 70.31           C
ATOM 7637  CG1 VAL A 512      17.763  58.724  34.563  1.00 74.73           C
ATOM 7641  CG2 VAL A 512      18.413  56.495  35.122  1.00 69.40           C
ATOM 7645  C   VAL A 512      15.961  58.568  37.218  1.00 72.75           C
ATOM 7646  O   VAL A 512      14.991  57.984  37.710  1.00 71.70           O
ATOM 7647  N   ASP A 513      15.953  59.871  36.952  1.00 75.55           N
ATOM 7649  CA  ASP A 513      14.763  60.722  37.132  1.00 78.34           C
ATOM 7651  CB  ASP A 513      15.195  62.210  37.064  1.00 82.23           C
ATOM 7654  CG  ASP A 513      15.778  62.604  35.666  1.00 86.47           C
ATOM 7655  OD1 ASP A 513      16.485  61.724  35.028  1.00 85.95           O
ATOM 7656  OD2 ASP A 513      15.527  63.750  35.143  1.00 89.04           O
ATOM 7657  C   ASP A 513      13.600  60.486  36.136  1.00 78.00           C
ATOM 7658  O   ASP A 513      12.407  60.618  36.490  1.00 78.71           O
ATOM 7659  N   LYS A 514      13.936  60.184  34.885  1.00 76.63           N
ATOM 7661  CA  LYS A 514      12.907  60.080  33.832  1.00 77.37           C
ATOM 7663  CB  LYS A 514      12.661  61.438  33.090  1.00 79.82           C
ATOM 7670  C   LYS A 514      13.389  59.087  32.841  1.00 74.72           C
ATOM 7671  O   LYS A 514      14.568  58.916  32.682  1.00 71.86           O
ATOM 7672  N   CYS A 515      12.473  58.478  32.118  1.00 75.49           N
ATOM 7674  CA  CYS A 515      12.882  57.736  30.931  1.00 75.27           C
ATOM 7676  CB  CYS A 515      11.953  56.576  30.660  1.00 74.23           C
ATOM 7679  SG  CYS A 515      12.029  55.503  32.049  1.00 75.96           S
ATOM 7680  C   CYS A 515      12.878  58.608  29.723  1.00 77.45           C
ATOM 7681  O   CYS A 515      12.396  59.736  29.762  1.00 80.72           O
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ATOM	7682	N	ASN	A	516	13.375	58.047	28.632	1.00	76.28	N
ATOM	7684	CA	ASN	A	516	13.450	58.745	27.390	1.00	78.27	C
ATOM	7686	CB	ASN	A	516	14.682	58.263	26.628	1.00	76.82	C
ATOM	7689	CG	ASN	A	516	15.962	58.751	27.257	1.00	76.59	C
ATOM	7690	OD1	ASN	A	516	15.913	59.562	28.158	1.00	76.10	O
ATOM	7691	ND2	ASN	A	516	17.118	58.255	26.792	1.00	78.58	N
ATOM	7694	C	ASN	A	516	12.162	58.593	26.589	1.00	79.48	C
ATOM	7695	O	ASN	A	516	12.214	58.369	25.392	1.00	80.32	O
ATOM	7696	N	LEU	A	517	11.005	58.722	27.247	1.00	80.26	N
ATOM	7698	CA	LEU	A	517	9.729	58.866	26.540	1.00	81.89	C
ATOM	7700	CB	LEU	A	517	8.536	58.802	27.508	1.00	82.29	C
ATOM	7703	CG	LEU	A	517	8.472	57.763	28.612	1.00	78.11	C
ATOM	7705	CD1	LEU	A	517	7.256	57.874	29.493	1.00	78.46	C
ATOM	7709	CD2	LEU	A	517	8.494	56.410	27.960	1.00	77.57	C
ATOM	7713	C	LEU	A	517	9.787	60.258	25.953	1.00	85.89	C
ATOM	7714	O	LEU	A	517	9.879	61.252	26.730	1.00	89.33	O
ATOM	7715	N	LEU	A	518	9.773	60.389	24.633	1.00	86.14	N
ATOM	7717	CA	LEU	A	518	9.569	61.731	24.037	1.00	89.84	C
ATOM	7719	CB	LEU	A	518	8.620	62.609	24.906	1.00	92.23	C
ATOM	7722	CG	LEU	A	518	7.226	62.059	25.263	1.00	91.47	C
ATOM	7724	CD1	LEU	A	518	6.556	62.839	26.352	1.00	93.70	C
ATOM	7728	CD2	LEU	A	518	6.382	62.115	24.048	1.00	93.66	C
ATOM	7732	C	LEU	A	518	10.827	62.542	23.724	1.00	90.91	C
ATOM	7733	O	LEU	A	518	10.733	63.588	23.093	1.00	94.73	O
ATOM	7734	N	GLU	A	519	11.990	62.050	24.106	1.00	88.21	N
ATOM	7736	CA	GLU	A	519	13.211	62.857	24.134	1.00	90.11	C
ATOM	7738	CB	GLU	A	519	13.100	64.031	25.150	1.00	92.09	C
ATOM	7741	C	GLU	A	519	14.289	61.868	24.579	1.00	87.46	C
ATOM	7742	O	GLU	A	519	14.162	61.310	25.671	1.00	86.35	O
ATOM	7747	N	GLY	A	520	15.305	61.576	23.753	1.00	87.39	N
ATOM	7749	CA	GLY	A	520	16.367	60.664	24.168	1.00	84.28	C
ATOM	7752	C	GLY	A	520	17.184	59.916	23.123	1.00	83.49	C
ATOM	7753	O	GLY	A	520	16.762	59.776	21.962	1.00	83.56	O
ATOM	7754	N	GLU	A	521	18.343	59.402	23.598	1.00	82.41	N
ATOM	7756	CA	GLU	A	521	19.346	58.645	22.811	1.00	81.13	C
ATOM	7758	CB	GLU	A	521	20.537	58.131	23.652	1.00	79.67	C
ATOM	7765	C	GLU	A	521	18.600	57.538	22.157	1.00	78.75	C
ATOM	7766	O	GLU	A	521	18.095	57.788	21.071	1.00	81.59	O
ATOM	7767	N	PRO	A	522	18.450	56.371	22.786	1.00	75.18	N
ATOM	7768	CA	PRO	A	522	17.393	55.446	22.365	1.00	72.91	C
ATOM	7770	CB	PRO	A	522	17.911	54.074	22.846	1.00	70.53	C
ATOM	7773	CG	PRO	A	522	18.755	54.376	24.063	1.00	70.29	C
ATOM	7776	CD	PRO	A	522	19.206	55.822	23.940	1.00	73.90	C
ATOM	7779	C	PRO	A	522	16.098	55.838	23.085	1.00	72.50	C
ATOM	7780	O	PRO	A	522	16.099	56.091	24.277	1.00	71.74	O
ATOM	7781	N	ARG	A	523	15.000	55.914	22.354	1.00	73.17	N
ATOM	7783	CA	ARG	A	523	13.700	56.209	22.950	1.00	73.74	C
ATOM	7785	CB	ARG	A	523	12.642	56.629	21.883	1.00	75.26	C
ATOM	7794	C	ARG	A	523	13.348	54.933	23.704	1.00	70.93	C
ATOM	7795	O	ARG	A	523	13.763	53.837	23.330	1.00	68.98	O
ATOM	7796	N	GLU	A	524	12.655	55.074	24.817	1.00	71.17	N
ATOM	7798	CA	GLU	A	524	12.390	53.915	25.690	1.00	69.50	C
ATOM	7800	CB	GLU	A	524	13.381	53.846	26.934	1.00	67.31	C
ATOM	7807	C	GLU	A	524	10.900	53.981	26.076	1.00	70.75	C
ATOM	7808	O	GLU	A	524	10.278	55.027	25.933	1.00	72.03	O
ATOM	7809	N	PHE	A	525	10.339	52.834	26.487	1.00	70.41	N
ATOM	7811	CA	PHE	A	525	9.073	52.756	27.238	1.00	71.56	C
ATOM	7813	CB	PHE	A	525	8.072	51.852	26.513	1.00	71.53	C
ATOM	7816	CG	PHE	A	525	8.376	50.386	26.625	1.00	68.87	C
ATOM	7817	CD1	PHE	A	525	7.672	49.582	27.527	1.00	66.88	C
ATOM	7819	CE1	PHE	A	525	7.933	48.262	27.624	1.00	65.64	C
ATOM	7821	CZ	PHE	A	525	8.923	47.692	26.821	1.00	65.09	C
ATOM	7823	CE2	PHE	A	525	9.625	48.470	25.920	1.00	64.47	C
ATOM	7825	CD2	PHE	A	525	9.348	49.810	25.824	1.00	66.17	C
ATOM	7827	C	PHE	A	525	9.370	52.267	28.663	1.00	70.74	C
ATOM	7828	O	PHE	A	525	10.511	52.060	29.014	1.00	69.95	O
ATOM	7829	N	VAL	A	526	8.350	52.071	29.478	1.00	72.42	N
ATOM	7831	CA	VAL	A	526	8.512	51.804	30.902	1.00	71.94	C

ATOM	7833	CB	VAL	A	526	8.002	52.989	31.696	1.00	73.98	C
ATOM	7835	CG1	VAL	A	526	7.837	52.617	33.185	1.00	75.09	C
ATOM	7839	CG2	VAL	A	526	8.908	54.239	31.481	1.00	74.24	C
ATOM	7843	C	VAL	A	526	7.648	50.632	31.327	1.00	73.13	C
ATOM	7844	O	VAL	A	526	6.495	50.506	30.870	1.00	75.47	O
ATOM	7845	N	GLU	A	527	8.176	49.785	32.218	1.00	72.37	N
ATOM	7847	CA	GLU	A	527	7.356	48.786	32.900	1.00	73.28	C
ATOM	7849	CB	GLU	A	527	7.025	47.568	32.001	1.00	73.10	C
ATOM	7852	CG	GLU	A	527	8.218	46.727	31.521	1.00	71.94	C
ATOM	7855	CD	GLU	A	527	7.836	45.371	30.851	1.00	72.04	C
ATOM	7856	OE1	GLU	A	527	6.743	45.307	30.202	1.00	69.38	O
ATOM	7857	OE2	GLU	A	527	8.648	44.377	30.965	1.00	68.38	O
ATOM	7858	C	GLU	A	527	8.000	48.365	34.226	1.00	72.76	C
ATOM	7859	O	GLU	A	527	9.115	47.824	34.258	1.00	71.27	O
ATOM	7860	N	ASN	A	528	7.244	48.589	35.308	1.00	74.36	N
ATOM	7862	CA	ASN	A	528	7.661	48.313	36.678	1.00	73.60	C
ATOM	7864	CB	ASN	A	528	7.986	46.830	36.923	1.00	72.97	C
ATOM	7867	CG	ASN	A	528	7.226	45.878	35.978	1.00	75.77	C
ATOM	7868	OD1	ASN	A	528	5.990	45.973	35.798	1.00	77.45	O
ATOM	7869	ND2	ASN	A	528	7.978	44.952	35.353	1.00	77.81	N
ATOM	7872	C	ASN	A	528	8.833	49.221	36.924	1.00	71.99	C
ATOM	7873	O	ASN	A	528	9.871	48.815	37.396	1.00	71.09	O
ATOM	7874	N	SER	A	529	8.652	50.478	36.543	1.00	72.85	N
ATOM	7876	CA	SER	A	529	9.608	51.521	36.862	1.00	71.65	C
ATOM	7878	CB	SER	A	529	9.699	51.713	38.387	1.00	72.07	C
ATOM	7881	OG	SER	A	529	8.447	52.198	38.850	1.00	75.50	O
ATOM	7883	C	SER	A	529	10.965	51.223	36.289	1.00	68.41	C
ATOM	7884	O	SER	A	529	11.971	51.654	36.838	1.00	67.15	O
ATOM	7885	N	GLU	A	530	11.000	50.523	35.172	1.00	66.50	N
ATOM	7887	CA	GLU	A	530	12.270	50.325	34.533	1.00	65.30	C
ATOM	7889	CB	GLU	A	530	12.844	48.908	34.841	1.00	64.54	C
ATOM	7892	CG	GLU	A	530	12.086	47.695	34.312	1.00	67.37	C
ATOM	7895	CD	GLU	A	530	12.640	46.360	34.858	1.00	71.17	C
ATOM	7896	OE1	GLU	A	530	13.473	46.411	35.793	1.00	73.46	O
ATOM	7897	OE2	GLU	A	530	12.263	45.242	34.358	1.00	73.29	O
ATOM	7898	C	GLU	A	530	12.191	50.692	33.060	1.00	64.85	C
ATOM	7899	O	GLU	A	530	11.152	50.638	32.500	1.00	65.79	O
ATOM	7900	N	CYS	A	531	13.302	51.128	32.477	1.00	64.45	N
ATOM	7902	CA	CYS	A	531	13.370	51.702	31.133	1.00	65.38	C
ATOM	7904	CB	CYS	A	531	14.157	52.986	31.109	1.00	66.14	C
ATOM	7907	SG	CYS	A	531	13.296	53.919	32.284	1.00	71.12	S
ATOM	7908	C	CYS	A	531	14.000	50.813	30.142	1.00	64.46	C
ATOM	7909	O	CYS	A	531	15.195	50.531	30.187	1.00	63.28	O
ATOM	7910	N	ILE	A	532	13.178	50.491	29.167	1.00	65.37	N
ATOM	7912	CA	ILE	A	532	13.468	49.509	28.187	1.00	65.17	C
ATOM	7914	CB	ILE	A	532	12.381	48.517	28.302	1.00	65.55	C
ATOM	7916	CG1	ILE	A	532	12.447	47.966	29.713	1.00	66.66	C
ATOM	7919	CD1	ILE	A	532	11.359	47.069	29.980	1.00	70.19	C
ATOM	7923	CG2	ILE	A	532	12.541	47.427	27.274	1.00	65.55	C
ATOM	7927	C	ILE	A	532	13.464	50.131	26.925	1.00	65.90	C
ATOM	7928	O	ILE	A	532	12.544	50.839	26.477	1.00	66.89	O
ATOM	7929	N	GLN	A	533	14.500	49.835	26.049	1.00	66.08	N
ATOM	7931	CA	GLN	A	533	14.651	50.416	24.711	1.00	67.62	C
ATOM	7933	CB	GLN	A	533	15.969	49.974	24.060	1.00	67.56	C
ATOM	7936	CG	GLN	A	533	17.233	50.681	24.519	1.00	69.80	C
ATOM	7939	CD	GLN	A	533	18.451	49.923	24.040	1.00	70.83	C
ATOM	7940	OE1	GLN	A	533	18.620	49.748	22.845	1.00	72.01	O
ATOM	7941	NE2	GLN	A	533	19.251	49.412	24.962	1.00	71.14	N
ATOM	7944	C	GLN	A	533	13.558	49.968	23.770	1.00	67.44	C
ATOM	7945	O	GLN	A	533	13.113	48.818	23.791	1.00	65.57	O
ATOM	7946	N	CYS	A	534	13.183	50.881	22.895	1.00	68.65	N
ATOM	7948	CA	CYS	A	534	12.323	50.512	21.786	1.00	69.43	C
ATOM	7950	CB	CYS	A	534	11.753	51.740	21.154	1.00	71.08	C
ATOM	7953	SG	CYS	A	534	10.611	52.557	22.300	1.00	73.86	S
ATOM	7954	C	CYS	A	534	13.126	49.751	20.777	1.00	68.25	C
ATOM	7955	O	CYS	A	534	14.262	50.108	20.508	1.00	68.52	O
ATOM	7956	N	HIS	A	535	12.543	48.707	20.222	1.00	66.84	N
ATOM	7958	CA	HIS	A	535	13.212	48.012	19.163	1.00	65.78	C

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ATOM 7960  CB  HIS A 535      12.216  47.085  18.497  1.00 66.02           C
ATOM 7963  CG  HIS A 535      12.824  46.218  17.462  1.00 64.32           C
ATOM 7964  ND1 HIS A 535      13.031  46.638  16.175  1.00 61.92           N
ATOM 7966  CE1 HIS A 535      13.599  45.677  15.489  1.00 64.12           C
ATOM 7969  NE2 HIS A 535      13.800  44.658  16.299  1.00 65.31           N
ATOM 7970  CD2 HIS A 535      13.337  44.980  17.543  1.00 64.19           C
ATOM 7972  C   HIS A 535      13.822  49.045  18.165  1.00 66.70           C
ATOM 7973  O   HIS A 535      13.217  50.069  17.907  1.00 68.03           O
ATOM 7974  N   PRO A 536      15.028  48.900  17.637  1.00 66.72           N
ATOM 7975  CA  PRO A 536      15.804  49.881  16.971  1.00 67.56           C
ATOM 7977  CB  PRO A 536      17.231  49.296  16.821  1.00 67.39           C
ATOM 7980  CG  PRO A 536      17.085  47.783  16.953  1.00 66.07           C
ATOM 7983  CD  PRO A 536      15.762  47.502  17.657  1.00 65.17           C
ATOM 7986  C   PRO A 536      15.311  50.179  15.631  1.00 68.62           C
ATOM 7987  O   PRO A 536      15.855  51.051  14.996  1.00 70.04           O
ATOM 7988  N   GLU A 537      14.367  49.374  15.170  1.00 68.61           N
ATOM 7990  CA  GLU A 537      13.650  49.638  13.937  1.00 69.99           C
ATOM 7992  CB  GLU A 537      13.211  48.324  13.277  1.00 68.51           C
ATOM 7995  CG  GLU A 537      14.325  47.611  12.610  1.00 68.09           C
ATOM 7998  CD  GLU A 537      15.045  48.492  11.626  1.00 70.66           C
ATOM 7999  OE1 GLU A 537      14.402  49.367  11.003  1.00 74.79           O
ATOM 8000  OE2 GLU A 537      16.267  48.319  11.485  1.00 72.71           O
ATOM 8001  C   GLU A 537      12.418  50.521  14.139  1.00 71.72           C
ATOM 8002  O   GLU A 537      11.672  50.711  13.201  1.00 74.11           O
ATOM 8003  N   CYS A 538      12.169  51.060  15.325  1.00 71.85           N
ATOM 8005  CA  CYS A 538      11.143  52.088  15.421  1.00 73.89           C
ATOM 8007  CB  CYS A 538      10.500  52.152  16.780  1.00 74.04           C
ATOM 8010  SG  CYS A 538       9.888  50.553  17.320  1.00 72.72           S
ATOM 8011  C   CYS A 538      11.770  53.404  15.135  1.00 75.65           C
ATOM 8012  O   CYS A 538      12.518  53.645  15.498  1.00 74.35           O
ATOM 8013  N   LEU A 539      10.989  54.235  14.445  1.00 78.81           N
ATOM 8015  CA  LEU A 539      11.368  55.584  14.097  1.00 81.09           C
ATOM 8017  CB  LEU A 539      10.672  55.993  12.829  1.00 83.53           C
ATOM 8020  CG  LEU A 539      11.126  57.328  12.277  1.00 86.35           C
ATOM 8022  CD1 LEU A 539      12.585  57.287  11.828  1.00 85.10           C
ATOM 8026  CD2 LEU A 539      10.163  57.659  11.175  1.00 88.79           C
ATOM 8030  C   LEU A 539      10.960  56.483  15.249  1.00 82.49           C
ATOM 8031  O   LEU A 539       9.773  56.549  15.611  1.00 82.07           O
ATOM 8032  N   PRO A 540      11.968  57.076  15.893  1.00 83.31           N
ATOM 8033  CA  PRO A 540      11.736  58.147  16.878  1.00 84.93           C
ATOM 8035  CB  PRO A 540      13.129  58.776  17.104  1.00 85.34           C
ATOM 8038  CG  PRO A 540      14.139  57.881  16.384  1.00 84.21           C
ATOM 8041  CD  PRO A 540      13.398  56.694  15.818  1.00 81.81           C
ATOM 8044  C   PRO A 540      10.784  59.185  16.374  1.00 88.12           C
ATOM 8045  O   PRO A 540      10.908  59.595  15.238  1.00 89.43           O
ATOM 8046  N   GLN A 541       9.886  59.604  17.258  1.00 89.34           N
ATOM 8048  CA  GLN A 541       8.794  60.495  16.962  1.00 92.72           C
ATOM 8050  CB  GLN A 541       7.463  59.830  17.324  1.00 92.16           C
ATOM 8053  CG  GLN A 541       7.171  58.527  16.577  1.00 89.77           C
ATOM 8056  CD  GLN A 541       6.354  58.684  15.285  1.00 92.88           C
ATOM 8057  OE1 GLN A 541       5.697  59.736  15.027  1.00 96.32           O
ATOM 8058  NE2 GLN A 541       6.385  57.629  14.462  1.00 88.98           N
ATOM 8061  C   GLN A 541       8.961  61.755  17.791  1.00 95.58           C
ATOM 8062  O   GLN A 541       8.962  61.700  19.017  1.00 93.76           O
ATOM 8063  N   ALA A 542       9.043  62.898  17.103  1.00100.12           N
ATOM 8065  CA  ALA A 542       9.171  64.199  17.758  1.00103.21           C
ATOM 8067  CB  ALA A 542       9.082  65.306  16.720  1.00107.95           C
ATOM 8071  C   ALA A 542       8.092  64.366  18.819  1.00104.03           C
ATOM 8072  O   ALA A 542       8.396  64.498  19.999  1.00103.11           O
ATOM 8073  N   MET A 543       6.834  64.281  18.400  1.00105.83           N
ATOM 8075  CA  MET A 543       5.718  64.631  19.277  1.00108.35           C
ATOM 8077  CB  MET A 543       4.430  64.701  18.477  1.00111.35           C
ATOM 8080  CG  MET A 543       4.523  65.603  17.241  1.00116.25           C
ATOM 8083  SD  MET A 543       4.822  67.395  17.470  1.00123.15           S
ATOM 8084  CE  MET A 543       6.486  67.662  18.473  1.00119.09           C
ATOM 8088  C   MET A 543       5.518  63.708  20.482  1.00105.56           C
ATOM 8089  O   MET A 543       5.645  64.161  21.642  1.00105.64           O
ATOM 8090  N   ASN A 544       5.215  62.425  20.192  1.00102.85           N
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ATOM	8092	CA	ASN	A	544	4.756	61.436	21.189	1.00 99.69	C
ATOM	8094	CB	ASN	A	544	3.440	60.756	20.758	1.00100.63	C
ATOM	8097	CG	ASN	A	544	2.311	61.737	20.593	1.00106.66	C
ATOM	8098	OD1	ASN	A	544	2.108	62.599	21.452	1.00113.63	O
ATOM	8099	ND2	ASN	A	544	1.587	61.647	19.474	1.00107.70	N
ATOM	8102	C	ASN	A	544	5.730	60.329	21.403	1.00 94.33	C
ATOM	8103	O	ASN	A	544	6.730	60.230	20.713	1.00 93.08	O
ATOM	8104	N	ILE	A	545	5.400	59.553	22.433	1.00 91.45	N
ATOM	8106	CA	ILE	A	545	5.741	58.160	22.629	1.00 86.98	C
ATOM	8108	CB	ILE	A	545	4.474	57.465	23.309	1.00 86.92	C
ATOM	8110	CG1	ILE	A	545	4.672	57.482	24.841	1.00 89.02	C
ATOM	8113	CD1	ILE	A	545	3.522	56.919	25.781	1.00 91.04	C
ATOM	8117	CG2	ILE	A	545	4.136	56.089	22.768	1.00 82.26	C
ATOM	8121	C	ILE	A	545	6.144	57.489	21.337	1.00 86.03	C
ATOM	8122	O	ILE	A	545	5.452	57.604	20.316	1.00 88.94	O
ATOM	8123	N	THR	A	546	7.267	56.788	21.380	1.00 82.71	N
ATOM	8125	CA	THR	A	546	7.828	56.125	20.215	1.00 80.76	C
ATOM	8127	CB	THR	A	546	9.312	56.458	20.162	1.00 79.71	C
ATOM	8129	OG1	THR	A	546	9.431	57.779	19.651	1.00 81.40	O
ATOM	8131	CG2	THR	A	546	10.108	55.583	19.160	1.00 77.72	C
ATOM	8135	C	THR	A	546	7.623	54.612	20.203	1.00 78.40	C
ATOM	8136	O	THR	A	546	8.110	53.971	19.274	1.00 76.95	O
ATOM	8137	N	CYS	A	547	6.944	54.045	21.218	1.00 77.55	N
ATOM	8139	CA	CYS	A	547	6.542	52.622	21.189	1.00 76.32	C
ATOM	8141	CB	CYS	A	547	7.766	51.712	21.067	1.00 73.37	C
ATOM	8144	SG	CYS	A	547	8.789	51.650	22.513	1.00 73.09	S
ATOM	8145	C	CYS	A	547	5.688	52.116	22.344	1.00 75.94	C
ATOM	8146	O	CYS	A	547	5.642	52.743	23.343	1.00 76.38	O
ATOM	8147	N	THR	A	548	5.047	50.955	22.188	1.00 76.01	N
ATOM	8149	CA	THR	A	548	4.280	50.292	23.254	1.00 76.89	C
ATOM	8151	CB	THR	A	548	3.066	49.538	22.668	1.00 78.86	C
ATOM	8153	OG1	THR	A	548	2.220	50.450	21.967	1.00 82.65	O
ATOM	8155	CG2	THR	A	548	2.142	48.955	23.780	1.00 80.14	C
ATOM	8159	C	THR	A	548	5.071	49.259	24.089	1.00 74.79	C
ATOM	8160	O	THR	A	548	4.572	48.822	25.099	1.00 75.56	O
ATOM	8161	N	GLY	A	549	6.289	48.875	23.701	1.00 72.66	N
ATOM	8163	CA	GLY	A	549	6.888	47.648	24.191	1.00 70.37	C
ATOM	8166	C	GLY	A	549	7.998	47.174	23.273	1.00 69.28	C
ATOM	8167	O	GLY	A	549	8.401	47.923	22.394	1.00 69.27	O
ATOM	8169	N	ARG	A	550	8.377	45.904	23.434	1.00 68.41	N
ATOM	8170	CA	ARG	A	550	9.617	45.393	22.863	1.00 66.94	C
ATOM	8172	CB	ARG	A	550	10.066	44.051	23.463	1.00 66.83	C
ATOM	8175	CG	ARG	A	550	9.594	43.646	24.804	1.00 67.69	C
ATOM	8178	CD	ARG	A	550	10.696	43.065	25.661	1.00 67.99	C
ATOM	8181	NE	ARG	A	550	10.467	43.536	27.012	1.00 68.71	N
ATOM	8183	CZ	ARG	A	550	11.350	43.538	27.946	1.00 68.02	C
ATOM	8184	NH1	ARG	A	550	12.548	43.056	27.689	1.00 71.35	N
ATOM	8187	NH2	ARG	A	550	11.035	43.998	29.154	1.00 67.97	N
ATOM	8190	C	ARG	A	550	9.593	45.083	21.401	1.00 67.18	C
ATOM	8191	O	ARG	A	550	10.654	45.058	20.759	1.00 65.99	O
ATOM	8192	N	GLY	A	551	8.434	44.712	20.882	1.00 68.91	N
ATOM	8194	CA	GLY	A	551	8.428	44.078	19.566	1.00 69.72	C
ATOM	8197	C	GLY	A	551	8.984	44.980	18.462	1.00 69.41	C
ATOM	8198	O	GLY	A	551	9.184	46.175	18.685	1.00 69.05	O
ATOM	8199	N	PRO	A	552	9.316	44.417	17.307	1.00 69.02	N
ATOM	8200	CA	PRO	A	552	9.076	45.130	16.050	1.00 70.16	C
ATOM	8202	CB	PRO	A	552	9.704	44.221	14.988	1.00 69.01	C
ATOM	8205	CG	PRO	A	552	9.805	42.977	15.585	1.00 68.43	C
ATOM	8208	CD	PRO	A	552	10.065	43.179	17.085	1.00 67.57	C
ATOM	8211	C	PRO	A	552	7.584	45.371	15.794	1.00 72.55	C
ATOM	8212	O	PRO	A	552	7.216	46.194	14.960	1.00 74.90	O
ATOM	8213	N	ASP	A	553	6.708	44.702	16.518	1.00 73.65	N
ATOM	8215	CA	ASP	A	553	5.288	44.960	16.308	1.00 76.41	C
ATOM	8217	CB	ASP	A	553	4.482	43.789	16.845	1.00 77.64	C
ATOM	8220	CG	ASP	A	553	4.690	42.533	16.029	1.00 80.59	C
ATOM	8221	OD1	ASP	A	553	5.877	42.294	15.647	1.00 83.78	O
ATOM	8222	OD2	ASP	A	553	3.750	41.737	15.698	1.00 84.59	O
ATOM	8223	C	ASP	A	553	4.864	46.275	16.990	1.00 77.13	C

ATOM	8224	O	ASP	A	553	4.011	47.012	16.498	1.00	79.38	O
ATOM	8225	N	ASN	A	554	5.493	46.576	18.117	1.00	75.22	N
ATOM	8227	CA	ASN	A	554	5.081	47.687	18.953	1.00	75.56	C
ATOM	8229	CB	ASN	A	554	5.296	47.312	20.423	1.00	75.01	C
ATOM	8232	CG	ASN	A	554	4.457	46.113	20.854	1.00	76.66	C
ATOM	8233	OD1	ASN	A	554	3.321	45.920	20.378	1.00	79.39	O
ATOM	8234	ND2	ASN	A	554	5.013	45.299	21.759	1.00	76.10	N
ATOM	8237	C	ASN	A	554	5.763	49.021	18.653	1.00	74.89	C
ATOM	8238	O	ASN	A	554	5.884	49.859	19.531	1.00	73.74	O
ATOM	8239	N	CYS	A	555	6.191	49.225	17.414	1.00	74.76	N
ATOM	8241	CA	CYS	A	555	6.585	50.553	16.971	1.00	76.15	C
ATOM	8243	CB	CYS	A	555	7.378	50.459	15.691	1.00	75.87	C
ATOM	8246	SG	CYS	A	555	8.888	49.525	15.840	1.00	74.07	S
ATOM	8247	C	CYS	A	555	5.378	51.399	16.664	1.00	79.28	C
ATOM	8248	O	CYS	A	555	4.303	50.908	16.314	1.00	80.23	O
ATOM	8249	N	ILE	A	556	5.549	52.690	16.757	1.00	81.45	N
ATOM	8251	CA	ILE	A	556	4.588	53.558	16.076	1.00	86.21	C
ATOM	8253	CB	ILE	A	556	4.217	54.775	16.994	1.00	88.59	C
ATOM	8255	CG1	ILE	A	556	3.285	54.332	18.145	1.00	88.42	C
ATOM	8258	CD1	ILE	A	556	2.945	55.465	19.180	1.00	90.10	C
ATOM	8262	CG2	ILE	A	556	3.656	55.923	16.146	1.00	91.71	C
ATOM	8266	C	ILE	A	556	5.349	54.028	14.841	1.00	86.58	C
ATOM	8267	O	ILE	A	556	6.353	54.729	14.990	1.00	89.16	O
ATOM	8268	N	GLN	A	557	4.994	53.618	13.653	1.00	85.39	N
ATOM	8270	CA	GLN	A	557	5.882	53.937	12.530	1.00	85.32	C
ATOM	8272	CB	GLN	A	557	6.184	55.456	12.453	1.00	87.88	C
ATOM	8275	CG	GLN	A	557	6.910	55.832	11.136	1.00	89.41	C
ATOM	8278	CD	GLN	A	557	6.557	57.164	10.557	1.00	91.93	C
ATOM	8279	OE1	GLN	A	557	6.456	58.148	11.270	1.00	95.30	O
ATOM	8280	NE2	GLN	A	557	6.423	57.209	9.247	1.00	92.15	N
ATOM	8283	C	GLN	A	557	7.229	53.165	12.420	1.00	81.67	C
ATOM	8284	O	GLN	A	557	8.085	53.251	13.261	1.00	80.12	O
ATOM	8285	N	CYS	A	558	7.428	52.507	11.295	1.00	81.23	N
ATOM	8287	CA	CYS	A	558	8.641	51.768	11.012	1.00	79.48	C
ATOM	8289	CB	CYS	A	558	8.296	50.683	10.007	1.00	79.37	C
ATOM	8292	SG	CYS	A	558	7.573	49.169	10.702	1.00	81.19	S
ATOM	8293	C	CYS	A	558	9.759	52.580	10.388	1.00	79.80	C
ATOM	8294	O	CYS	A	558	9.589	53.173	9.377	1.00	81.16	O
ATOM	8295	N	ALA	A	559	10.915	52.512	10.935	1.00	78.94	N
ATOM	8297	CA	ALA	A	559	12.079	53.313	10.421	1.00	80.38	C
ATOM	8299	CB	ALA	A	559	13.371	53.087	11.285	1.00	78.77	C
ATOM	8303	C	ALA	A	559	12.432	53.046	8.989	1.00	80.70	C
ATOM	8304	O	ALA	A	559	12.772	53.965	8.290	1.00	83.71	O
ATOM	8305	N	HIS	A	560	12.415	51.785	8.580	1.00	78.83	N
ATOM	8307	CA	HIS	A	560	13.025	51.377	7.327	1.00	78.93	C
ATOM	8309	CB	HIS	A	560	14.232	50.473	7.616	1.00	77.41	C
ATOM	8312	CG	HIS	A	560	15.521	51.202	7.931	1.00	79.72	C
ATOM	8313	ND1	HIS	A	560	16.068	52.180	7.112	1.00	82.70	N
ATOM	8315	CE1	HIS	A	560	17.212	52.607	7.631	1.00	84.13	C
ATOM	8317	NE2	HIS	A	560	17.429	51.939	8.758	1.00	83.15	N
ATOM	8319	CD2	HIS	A	560	16.395	51.050	8.962	1.00	79.11	C
ATOM	8321	C	HIS	A	560	11.932	50.680	6.503	1.00	78.66	C
ATOM	8322	O	HIS	A	560	11.189	51.365	5.825	1.00	81.48	O
ATOM	8323	N	TYR	A	561	11.771	49.354	6.575	1.00	76.45	N
ATOM	8325	CA	TYR	A	561	10.666	48.684	5.844	1.00	76.16	C
ATOM	8327	CB	TYR	A	561	11.162	47.651	4.814	1.00	75.26	C
ATOM	8330	CG	TYR	A	561	12.188	48.263	3.937	1.00	76.43	C
ATOM	8331	CD1	TYR	A	561	13.544	48.158	4.251	1.00	76.49	C
ATOM	8333	CE1	TYR	A	561	14.514	48.770	3.507	1.00	77.50	C
ATOM	8335	CZ	TYR	A	561	14.133	49.520	2.438	1.00	81.83	C
ATOM	8336	OH	TYR	A	561	15.079	50.155	1.675	1.00	86.33	O
ATOM	8338	CE2	TYR	A	561	12.789	49.645	2.097	1.00	82.34	C
ATOM	8340	CD2	TYR	A	561	11.824	49.028	2.861	1.00	79.04	C
ATOM	8342	C	TYR	A	561	9.733	48.040	6.820	1.00	74.68	C
ATOM	8343	O	TYR	A	561	10.052	47.969	8.013	1.00	72.79	O
ATOM	8344	N	ILE	A	562	8.576	47.624	6.285	1.00	75.37	N
ATOM	8346	CA	ILE	A	562	7.533	46.899	7.014	1.00	75.42	C
ATOM	8348	CB	ILE	A	562	6.207	47.710	7.246	1.00	77.81	C

ATOM	8350	CG1	ILE	A	562	6.473	49.235	7.482	1.00	81.60	C
ATOM	8353	CD1	ILE	A	562	5.649	50.324	6.529	1.00	83.69	C
ATOM	8357	CG2	ILE	A	562	5.419	47.117	8.432	1.00	75.53	C
ATOM	8361	C	ILE	A	562	7.189	45.624	6.263	1.00	75.08	C
ATOM	8362	O	ILE	A	562	6.904	45.638	5.077	1.00	75.61	O
ATOM	8363	N	ASP	A	563	7.225	44.529	7.012	1.00	73.98	N
ATOM	8365	CA	ASP	A	563	6.927	43.193	6.553	1.00	73.94	C
ATOM	8367	CB	ASP	A	563	8.170	42.341	6.827	1.00	72.30	C
ATOM	8370	CG	ASP	A	563	8.107	40.945	6.226	1.00	72.50	C
ATOM	8371	OD1	ASP	A	563	7.372	40.727	5.229	1.00	70.35	O
ATOM	8372	OD2	ASP	A	563	8.822	40.012	6.712	1.00	72.64	O
ATOM	8373	C	ASP	A	563	5.760	42.742	7.401	1.00	74.39	C
ATOM	8374	O	ASP	A	563	5.902	42.627	8.612	1.00	73.65	O
ATOM	8375	N	GLY	A	564	4.600	42.522	6.796	1.00	75.74	N
ATOM	8377	CA	GLY	A	564	3.414	42.251	7.590	1.00	77.02	C
ATOM	8380	C	GLY	A	564	3.269	43.192	8.781	1.00	76.38	C
ATOM	8381	O	GLY	A	564	3.406	44.373	8.626	1.00	75.98	O
ATOM	8382	N	PRO	A	565	2.992	42.679	9.966	1.00	76.69	N
ATOM	8383	CA	PRO	A	565	2.937	43.529	11.162	1.00	77.09	C
ATOM	8385	CB	PRO	A	565	2.388	42.599	12.264	1.00	77.30	C
ATOM	8388	CG	PRO	A	565	2.710	41.225	11.789	1.00	77.15	C
ATOM	8391	CD	PRO	A	565	2.673	41.277	10.276	1.00	77.40	C
ATOM	8394	C	PRO	A	565	4.264	44.083	11.612	1.00	75.13	C
ATOM	8395	O	PRO	A	565	4.210	45.061	12.315	1.00	76.23	O
ATOM	8396	N	HIS	A	566	5.389	43.477	11.245	1.00	73.76	N
ATOM	8398	CA	HIS	A	566	6.707	43.775	11.819	1.00	71.93	C
ATOM	8400	CB	HIS	A	566	7.618	42.556	11.660	1.00	70.47	C
ATOM	8403	CG	HIS	A	566	7.029	41.249	12.095	1.00	70.87	C
ATOM	8404	ND1	HIS	A	566	7.119	40.789	13.387	1.00	71.81	N
ATOM	8406	CE1	HIS	A	566	6.566	39.590	13.461	1.00	74.18	C
ATOM	8408	NE2	HIS	A	566	6.133	39.251	12.260	1.00	73.76	N
ATOM	8410	CD2	HIS	A	566	6.430	40.264	11.386	1.00	72.64	C
ATOM	8412	C	HIS	A	566	7.442	44.879	11.078	1.00	72.22	C
ATOM	8413	O	HIS	A	566	7.337	44.943	9.859	1.00	74.16	O
ATOM	8414	N	CYS	A	567	8.246	45.687	11.769	1.00	71.03	N
ATOM	8416	CA	CYS	A	567	9.234	46.549	11.105	1.00	70.86	C
ATOM	8418	CB	CYS	A	567	9.604	47.726	11.972	1.00	71.52	C
ATOM	8421	SG	CYS	A	567	8.241	48.666	12.577	1.00	73.87	S
ATOM	8422	C	CYS	A	567	10.530	45.832	10.962	1.00	69.04	C
ATOM	8423	O	CYS	A	567	11.035	45.332	11.937	1.00	68.08	O
ATOM	8424	N	VAL	A	568	11.128	45.862	9.788	1.00	69.34	N
ATOM	8426	CA	VAL	A	568	12.431	45.284	9.614	1.00	68.53	C
ATOM	8428	CB	VAL	A	568	12.355	44.035	8.788	1.00	69.32	C
ATOM	8430	CG1	VAL	A	568	13.574	42.972	9.226	1.00	69.18	C
ATOM	8434	CG2	VAL	A	568	10.953	43.396	8.907	1.00	70.17	C
ATOM	8438	C	VAL	A	568	13.381	46.205	8.951	1.00	68.70	C
ATOM	8439	O	VAL	A	568	12.953	47.118	8.287	1.00	71.27	O
ATOM	8440	N	LYS	A	569	14.673	45.970	9.158	1.00	67.78	N
ATOM	8442	CA	LYS	A	569	15.725	46.687	8.455	1.00	69.12	C
ATOM	8444	CB	LYS	A	569	17.100	46.328	9.026	1.00	68.55	C
ATOM	8447	CG	LYS	A	569	18.246	47.213	8.440	1.00	72.13	C
ATOM	8450	CD	LYS	A	569	19.587	47.155	9.229	1.00	73.34	C
ATOM	8453	CE	LYS	A	569	20.258	48.558	9.307	1.00	75.82	C
ATOM	8456	NZ	LYS	A	569	21.618	48.573	9.964	1.00	77.31	N
ATOM	8460	C	LYS	A	569	15.732	46.425	6.945	1.00	70.04	C
ATOM	8461	O	LYS	A	569	16.006	47.328	6.144	1.00	71.03	O
ATOM	8462	N	THR	A	570	15.498	45.170	6.573	1.00	69.61	N
ATOM	8464	CA	THR	A	570	15.401	44.774	5.179	1.00	70.80	C
ATOM	8466	CB	THR	A	570	16.551	43.874	4.758	1.00	70.64	C
ATOM	8468	OG1	THR	A	570	17.678	44.132	5.574	1.00	69.69	O
ATOM	8470	CG2	THR	A	570	17.028	44.225	3.290	1.00	73.62	C
ATOM	8474	C	THR	A	570	14.147	43.992	4.941	1.00	71.10	C
ATOM	8475	O	THR	A	570	13.566	43.417	5.860	1.00	70.34	O
ATOM	8476	N	CYS	A	571	13.727	43.956	3.684	1.00	72.17	N
ATOM	8478	CA	CYS	A	571	12.740	42.992	3.308	1.00	72.52	C
ATOM	8480	CB	CYS	A	571	12.089	43.404	2.008	1.00	74.33	C
ATOM	8483	SG	CYS	A	571	10.724	44.604	2.195	1.00	78.47	S
ATOM	8484	C	CYS	A	571	13.468	41.631	3.216	1.00	71.56	C

ATOM	8485	O	CYS	A	571	14.624	41.563	2.831	1.00 71.33	O
ATOM	8486	N	PRO	A	572	12.807	40.570	3.634	1.00 71.21	N
ATOM	8487	CA	PRO	A	572	13.365	39.208	3.601	1.00 70.85	C
ATOM	8489	CB	PRO	A	572	12.172	38.339	3.923	1.00 71.07	C
ATOM	8492	CG	PRO	A	572	11.307	39.225	4.741	1.00 72.16	C
ATOM	8495	CD	PRO	A	572	11.470	40.617	4.231	1.00 71.58	C
ATOM	8498	C	PRO	A	572	13.861	38.806	2.253	1.00 71.37	C
ATOM	8499	O	PRO	A	572	13.118	38.873	1.309	1.00 71.71	O
ATOM	8500	N	ALA	A	573	15.091	38.332	2.192	1.00 71.59	N
ATOM	8502	CA	ALA	A	573	15.743	37.986	0.933	1.00 72.60	C
ATOM	8504	CB	ALA	A	573	16.655	39.103	0.532	1.00 72.49	C
ATOM	8508	C	ALA	A	573	16.537	36.667	1.074	1.00 72.93	C
ATOM	8509	O	ALA	A	573	17.586	36.608	1.717	1.00 73.24	O
ATOM	8510	N	GLY	A	574	16.044	35.603	0.472	1.00 73.55	N
ATOM	8512	CA	GLY	A	574	16.781	34.355	0.481	1.00 75.15	C
ATOM	8515	C	GLY	A	574	16.810	33.712	1.853	1.00 74.56	C
ATOM	8516	O	GLY	A	574	17.826	33.607	2.501	1.00 74.55	O
ATOM	8517	N	VAL	A	575	15.638	33.301	2.271	1.00 74.53	N
ATOM	8519	CA	VAL	A	575	15.376	32.861	3.612	1.00 74.16	C
ATOM	8521	CB	VAL	A	575	14.468	33.930	4.276	1.00 72.51	C
ATOM	8523	CG1	VAL	A	575	13.634	33.376	5.319	1.00 73.47	C
ATOM	8527	CG2	VAL	A	575	15.322	34.978	4.860	1.00 70.07	C
ATOM	8531	C	VAL	A	575	14.734	31.494	3.412	1.00 75.88	C
ATOM	8532	O	VAL	A	575	14.015	31.284	2.455	1.00 76.15	O
ATOM	8533	N	MET	A	576	15.001	30.517	4.243	1.00 77.05	N
ATOM	8535	CA	MET	A	576	14.451	29.252	3.827	1.00 79.91	C
ATOM	8537	CB	MET	A	576	15.111	28.104	4.533	1.00 81.42	C
ATOM	8540	CG	MET	A	576	14.645	26.801	3.936	1.00 85.73	C
ATOM	8543	SD	MET	A	576	14.960	26.651	2.151	1.00 89.21	S
ATOM	8544	CE	MET	A	576	16.875	26.184	2.371	1.00 90.57	C
ATOM	8548	C	MET	A	576	12.921	29.212	3.989	1.00 80.55	C
ATOM	8549	O	MET	A	576	12.415	29.721	4.978	1.00 79.42	O
ATOM	8550	N	GLY	A	577	12.218	28.602	3.012	1.00 82.68	N
ATOM	8552	CA	GLY	A	577	10.765	28.366	3.050	1.00 84.07	C
ATOM	8555	C	GLY	A	577	10.277	26.939	2.725	1.00 87.30	C
ATOM	8556	O	GLY	A	577	11.075	25.988	2.639	1.00 88.11	O
ATOM	8557	N	GLU	A	578	8.948	26.807	2.560	1.00 89.19	N
ATOM	8559	CA	GLU	A	578	8.275	25.574	2.078	1.00 92.83	C
ATOM	8561	CB	GLU	A	578	6.821	25.929	1.572	1.00 93.63	C
ATOM	8564	CG	GLU	A	578	5.928	24.741	1.086	1.00 98.08	C
ATOM	8567	CD	GLU	A	578	5.383	24.801	-0.403	1.00100.15	C
ATOM	8568	OE1	GLU	A	578	5.169	25.906	-0.965	1.00100.10	O
ATOM	8569	OE2	GLU	A	578	5.120	23.730	-1.024	1.00100.27	O
ATOM	8570	C	GLU	A	578	9.100	24.860	0.942	1.00 94.09	C
ATOM	8571	O	GLU	A	578	9.703	25.548	0.100	1.00 92.98	O
ATOM	8572	N	ASN	A	579	9.092	23.509	0.905	1.00 96.70	N
ATOM	8574	CA	ASN	A	579	9.654	22.694	-0.210	1.00 97.87	C
ATOM	8576	CB	ASN	A	579	8.673	22.664	-1.431	1.00 98.97	C
ATOM	8579	CG	ASN	A	579	8.787	21.320	-2.343	1.00103.58	C
ATOM	8580	OD1	ASN	A	579	9.375	20.292	-1.934	1.00107.20	O
ATOM	8581	ND2	ASN	A	579	8.176	21.367	-3.567	1.00102.91	N
ATOM	8584	C	ASN	A	579	11.088	23.139	-0.599	1.00 95.88	C
ATOM	8585	O	ASN	A	579	11.436	23.228	-1.761	1.00 95.66	O
ATOM	8586	N	ASN	A	580	11.921	23.436	0.392	1.00 94.91	N
ATOM	8588	CA	ASN	A	580	13.261	23.999	0.150	1.00 93.61	C
ATOM	8590	CB	ASN	A	580	14.272	22.905	-0.271	1.00 96.16	C
ATOM	8593	CG	ASN	A	580	15.723	23.230	0.188	1.00 96.15	C
ATOM	8594	OD1	ASN	A	580	16.025	24.371	0.471	1.00 97.19	O
ATOM	8595	ND2	ASN	A	580	16.599	22.237	0.248	1.00 96.25	N
ATOM	8598	C	ASN	A	580	13.325	25.157	-0.873	1.00 91.65	C
ATOM	8599	O	ASN	A	580	14.368	25.364	-1.497	1.00 91.22	O
ATOM	8600	N	THR	A	581	12.220	25.893	-1.049	1.00 90.43	N
ATOM	8602	CA	THR	A	581	12.204	27.090	-1.901	1.00 88.39	C
ATOM	8604	CB	THR	A	581	10.888	27.209	-2.798	1.00 89.27	C
ATOM	8606	OG1	THR	A	581	9.764	27.589	-1.994	1.00 89.04	O
ATOM	8608	CG2	THR	A	581	10.466	25.857	-3.437	1.00 92.43	C
ATOM	8612	C	THR	A	581	12.406	28.367	-1.034	1.00 84.96	C
ATOM	8613	O	THR	A	581	11.544	28.728	-0.221	1.00 83.83	O

ATOM	8614	N	LEU	A	582	13.563	29.011	-1.223	1.00	82.72	N
ATOM	8616	CA	LEU	A	582	13.796	30.357	-0.742	1.00	79.94	C
ATOM	8618	CB	LEU	A	582	15.097	30.931	-1.288	1.00	79.24	C
ATOM	8621	CG	LEU	A	582	16.381	30.246	-0.893	1.00	80.18	C
ATOM	8623	CD1	LEU	A	582	17.569	31.154	-1.231	1.00	79.77	C
ATOM	8627	CD2	LEU	A	582	16.366	29.908	0.573	1.00	80.16	C
ATOM	8631	C	LEU	A	582	12.669	31.327	-1.083	1.00	78.75	C
ATOM	8632	O	LEU	A	582	11.920	31.175	-2.062	1.00	78.56	O
ATOM	8633	N	VAL	A	583	12.627	32.351	-0.238	1.00	77.04	N
ATOM	8635	CA	VAL	A	583	11.565	33.320	-0.172	1.00	76.73	C
ATOM	8637	CB	VAL	A	583	10.838	33.269	1.201	1.00	76.17	C
ATOM	8639	CG1	VAL	A	583	9.880	34.449	1.387	1.00	75.25	C
ATOM	8643	CG2	VAL	A	583	10.076	31.987	1.302	1.00	78.05	C
ATOM	8647	C	VAL	A	583	12.202	34.664	-0.367	1.00	75.52	C
ATOM	8648	O	VAL	A	583	13.122	35.011	0.368	1.00	74.49	O
ATOM	8649	N	TRP	A	584	11.705	35.404	-1.363	1.00	75.92	N
ATOM	8651	CA	TRP	A	584	12.152	36.769	-1.631	1.00	74.96	C
ATOM	8653	CB	TRP	A	584	12.784	36.822	-3.004	1.00	75.84	C
ATOM	8656	CG	TRP	A	584	13.929	35.915	-3.112	1.00	75.22	C
ATOM	8657	CD1	TRP	A	584	13.892	34.622	-3.468	1.00	73.95	C
ATOM	8659	NE1	TRP	A	584	15.156	34.097	-3.430	1.00	72.84	N
ATOM	8661	CE2	TRP	A	584	16.035	35.062	-3.034	1.00	72.12	C
ATOM	8662	CD2	TRP	A	584	15.298	36.220	-2.810	1.00	73.54	C
ATOM	8663	CE3	TRP	A	584	15.972	37.367	-2.379	1.00	73.41	C
ATOM	8665	CZ3	TRP	A	584	17.340	37.308	-2.209	1.00	74.46	C
ATOM	8667	CH2	TRP	A	584	18.035	36.127	-2.434	1.00	75.07	C
ATOM	8669	CZ2	TRP	A	584	17.397	35.002	-2.850	1.00	73.68	C
ATOM	8671	C	TRP	A	584	11.015	37.767	-1.589	1.00	74.89	C
ATOM	8672	O	TRP	A	584	9.880	37.450	-1.907	1.00	75.76	O
ATOM	8673	N	LYS	A	585	11.332	38.992	-1.213	1.00	74.03	N
ATOM	8675	CA	LYS	A	585	10.341	40.037	-1.097	1.00	73.90	C
ATOM	8677	CB	LYS	A	585	9.857	40.189	0.369	1.00	72.96	C
ATOM	8680	CG	LYS	A	585	8.762	39.160	0.785	1.00	72.93	C
ATOM	8683	CD	LYS	A	585	7.912	39.538	2.029	1.00	71.79	C
ATOM	8686	CE	LYS	A	585	6.856	38.458	2.403	1.00	72.28	C
ATOM	8689	NZ	LYS	A	585	6.373	38.409	3.829	1.00	71.42	N
ATOM	8693	C	LYS	A	585	10.947	41.305	-1.619	1.00	73.86	C
ATOM	8694	O	LYS	A	585	12.140	41.474	-1.545	1.00	71.84	O
ATOM	8695	N	TYR	A	586	10.104	42.174	-2.184	1.00	75.89	N
ATOM	8697	CA	TYR	A	586	10.490	43.531	-2.525	1.00	77.16	C
ATOM	8699	CB	TYR	A	586	10.230	43.846	-3.986	1.00	79.32	C
ATOM	8702	CG	TYR	A	586	8.763	43.925	-4.384	1.00	81.59	C
ATOM	8703	CD1	TYR	A	586	8.213	45.101	-4.860	1.00	82.49	C
ATOM	8705	CE1	TYR	A	586	6.859	45.174	-5.239	1.00	86.87	C
ATOM	8707	CZ	TYR	A	586	6.024	44.052	-5.144	1.00	87.16	C
ATOM	8708	OH	TYR	A	586	4.674	44.110	-5.515	1.00	87.71	O
ATOM	8710	CE2	TYR	A	586	6.560	42.871	-4.672	1.00	85.36	C
ATOM	8712	CD2	TYR	A	586	7.928	42.812	-4.287	1.00	82.83	C
ATOM	8714	C	TYR	A	586	9.748	44.512	-1.639	1.00	77.86	C
ATOM	8715	O	TYR	A	586	8.764	44.169	-0.970	1.00	76.82	O
ATOM	8716	N	ALA	A	587	10.264	45.735	-1.642	1.00	79.52	N
ATOM	8718	CA	ALA	A	587	9.624	46.881	-1.005	1.00	81.22	C
ATOM	8720	CB	ALA	A	587	10.664	47.718	-0.259	1.00	81.30	C
ATOM	8724	C	ALA	A	587	8.942	47.760	-2.040	1.00	83.87	C
ATOM	8725	O	ALA	A	587	9.587	48.225	-2.966	1.00	85.06	O
ATOM	8726	N	ASP	A	588	7.646	48.003	-1.873	1.00	85.42	N
ATOM	8728	CA	ASP	A	588	6.956	49.034	-2.638	1.00	87.97	C
ATOM	8730	CB	ASP	A	588	5.453	48.660	-2.823	1.00	89.10	C
ATOM	8733	CG	ASP	A	588	4.586	48.846	-1.562	1.00	88.49	C
ATOM	8734	OD1	ASP	A	588	4.972	49.551	-0.614	1.00	88.44	O
ATOM	8735	OD2	ASP	A	588	3.453	48.328	-1.455	1.00	88.07	O
ATOM	8736	C	ASP	A	588	7.209	50.472	-2.088	1.00	89.91	C
ATOM	8737	O	ASP	A	588	7.973	50.687	-1.122	1.00	88.35	O
ATOM	8738	N	ALA	A	589	6.571	51.439	-2.751	1.00	93.88	N
ATOM	8740	CA	ALA	A	589	6.641	52.881	-2.458	1.00	96.73	C
ATOM	8742	CB	ALA	A	589	5.728	53.626	-3.421	1.00	100.11	C
ATOM	8746	C	ALA	A	589	6.276	53.241	-1.005	1.00	96.86	C
ATOM	8747	O	ALA	A	589	6.805	54.223	-0.437	1.00	98.22	O

ATOM	8748	N	GLY	A	590	5.363	52.441	-0.433	1.00	95.88	N
ATOM	8750	CA	GLY	A	590	4.993	52.493	0.975	1.00	94.90	C
ATOM	8753	C	GLY	A	590	6.013	51.865	1.906	1.00	91.58	C
ATOM	8754	O	GLY	A	590	5.808	51.912	3.111	1.00	90.28	O
ATOM	8755	N	HIS	A	591	7.114	51.337	1.348	1.00	90.22	N
ATOM	8757	CA	HIS	A	591	8.120	50.545	2.075	1.00	87.77	C
ATOM	8759	CB	HIS	A	591	8.959	51.439	3.071	1.00	88.45	C
ATOM	8762	CG	HIS	A	591	9.793	52.510	2.391	1.00	95.05	C
ATOM	8763	ND1	HIS	A	591	9.493	53.860	2.461	1.00	103.48	N
ATOM	8765	CE1	HIS	A	591	10.363	54.550	1.732	1.00	106.24	C
ATOM	8767	NE2	HIS	A	591	11.225	53.702	1.194	1.00	104.71	N
ATOM	8769	CD2	HIS	A	591	10.895	52.423	1.597	1.00	98.92	C
ATOM	8771	C	HIS	A	591	7.502	49.249	2.733	1.00	84.53	C
ATOM	8772	O	HIS	A	591	7.962	48.785	3.794	1.00	82.29	O
ATOM	8773	N	VAL	A	592	6.486	48.675	2.075	1.00	83.76	N
ATOM	8775	CA	VAL	A	592	5.796	47.466	2.544	1.00	81.76	C
ATOM	8777	CB	VAL	A	592	4.215	47.621	2.498	1.00	83.71	C
ATOM	8779	CG1	VAL	A	592	3.457	46.343	2.905	1.00	81.70	C
ATOM	8783	CG2	VAL	A	592	3.769	48.747	3.396	1.00	85.59	C
ATOM	8787	C	VAL	A	592	6.300	46.291	1.683	1.00	80.26	C
ATOM	8788	O	VAL	A	592	6.623	46.478	0.512	1.00	80.92	O
ATOM	8789	N	CYS	A	593	6.362	45.087	2.259	1.00	77.78	N
ATOM	8791	CA	CYS	A	593	7.075	43.998	1.639	1.00	75.78	C
ATOM	8793	CB	CYS	A	593	7.847	43.219	2.689	1.00	74.24	C
ATOM	8796	SG	CYS	A	593	9.221	44.051	3.477	1.00	73.14	S
ATOM	8797	C	CYS	A	593	6.122	43.052	1.000	1.00	76.03	C
ATOM	8798	O	CYS	A	593	5.141	42.647	1.620	1.00	75.39	O
ATOM	8799	N	HIS	A	594	6.431	42.645	-0.221	1.00	76.34	N
ATOM	8801	CA	HIS	A	594	5.581	41.688	-0.899	1.00	78.01	C
ATOM	8803	CB	HIS	A	594	4.684	42.369	-1.960	1.00	80.52	C
ATOM	8806	CG	HIS	A	594	3.723	43.390	-1.407	1.00	81.95	C
ATOM	8807	ND1	HIS	A	594	2.483	43.052	-0.907	1.00	83.85	N
ATOM	8809	CE1	HIS	A	594	1.864	44.144	-0.490	1.00	84.93	C
ATOM	8811	NE2	HIS	A	594	2.657	45.179	-0.700	1.00	84.02	N
ATOM	8813	CD2	HIS	A	594	3.827	44.736	-1.271	1.00	81.36	C
ATOM	8815	C	HIS	A	594	6.429	40.639	-1.555	1.00	77.43	C
ATOM	8816	O	HIS	A	594	7.563	40.878	-1.901	1.00	76.36	O
ATOM	8817	N	LEU	A	595	5.821	39.480	-1.748	1.00	78.64	N
ATOM	8819	CA	LEU	A	595	6.443	38.324	-2.362	1.00	78.53	C
ATOM	8821	CB	LEU	A	595	5.448	37.149	-2.299	1.00	79.33	C
ATOM	8824	CG	LEU	A	595	5.801	35.797	-1.684	1.00	78.71	C
ATOM	8826	CD1	LEU	A	595	6.898	35.909	-0.658	1.00	76.77	C
ATOM	8830	CD2	LEU	A	595	4.553	35.115	-1.075	1.00	80.22	C
ATOM	8834	C	LEU	A	595	6.829	38.606	-3.822	1.00	80.06	C
ATOM	8835	O	LEU	A	595	6.092	39.243	-4.551	1.00	81.01	O
ATOM	8836	N	CYS	A	596	7.989	38.116	-4.238	1.00	80.39	N
ATOM	8838	CA	CYS	A	596	8.402	38.165	-5.626	1.00	82.14	C
ATOM	8840	CB	CYS	A	596	9.907	37.993	-5.745	1.00	81.09	C
ATOM	8843	SG	CYS	A	596	10.896	39.338	-5.042	1.00	82.20	S
ATOM	8844	C	CYS	A	596	7.750	37.016	-6.381	1.00	84.23	C
ATOM	8845	O	CYS	A	596	7.182	36.099	-5.758	1.00	84.81	O
ATOM	8846	N	HIS	A	597	7.839	37.077	-7.726	1.00	85.98	N
ATOM	8848	CA	HIS	A	597	7.387	35.991	-8.602	1.00	86.82	C
ATOM	8850	CB	HIS	A	597	7.815	36.182	-10.084	1.00	88.03	C
ATOM	8853	CG	HIS	A	597	6.992	35.395	-11.096	1.00	91.55	C
ATOM	8854	ND1	HIS	A	597	5.695	34.962	-10.863	1.00	94.55	N
ATOM	8856	CE1	HIS	A	597	5.231	34.335	-11.930	1.00	94.09	C
ATOM	8858	NE2	HIS	A	597	6.176	34.338	-12.851	1.00	94.23	N
ATOM	8860	CD2	HIS	A	597	7.278	35.008	-12.366	1.00	92.74	C
ATOM	8862	C	HIS	A	597	8.102	34.818	-8.053	1.00	85.24	C
ATOM	8863	O	HIS	A	597	9.227	34.973	-7.601	1.00	82.66	O
ATOM	8864	N	PRO	A	598	7.470	33.649	-8.079	1.00	86.55	N
ATOM	8865	CA	PRO	A	598	8.206	32.453	-7.664	1.00	86.49	C
ATOM	8867	CB	PRO	A	598	7.109	31.362	-7.590	1.00	88.23	C
ATOM	8870	CG	PRO	A	598	5.750	32.113	-7.680	1.00	88.45	C
ATOM	8873	CD	PRO	A	598	6.076	33.330	-8.490	1.00	87.86	C
ATOM	8876	C	PRO	A	598	9.361	32.186	-8.678	1.00	86.52	C
ATOM	8877	O	PRO	A	598	10.423	31.664	-8.294	1.00	85.89	O

ATOM	8878	N	ASN	A	599	9.205	32.641	-9.925	1.00	87.20	N
ATOM	8880	CA	ASN	A	599	10.270	32.471	-10.943	1.00	87.60	C
ATOM	8882	CB	ASN	A	599	9.669	32.588	-12.365	1.00	88.64	C
ATOM	8885	CG	ASN	A	599	9.382	31.218	-13.006	1.00	90.07	C
ATOM	8886	OD1	ASN	A	599	9.676	31.000	-14.178	1.00	92.33	O
ATOM	8887	ND2	ASN	A	599	8.799	30.307	-12.241	1.00	88.59	N
ATOM	8890	C	ASN	A	599	11.524	33.388	-10.788	1.00	86.52	C
ATOM	8891	O	ASN	A	599	12.405	33.364	-11.639	1.00	87.32	O
ATOM	8892	N	CYS	A	600	11.599	34.182	-9.712	1.00	84.92	N
ATOM	8894	CA	CYS	A	600	12.739	35.071	-9.439	1.00	83.58	C
ATOM	8896	CB	CYS	A	600	12.275	36.331	-8.714	1.00	83.07	C
ATOM	8899	SG	CYS	A	600	11.574	37.524	-9.848	1.00	86.34	S
ATOM	8900	C	CYS	A	600	13.757	34.368	-8.590	1.00	82.06	C
ATOM	8901	O	CYS	A	600	13.838	34.583	-7.390	1.00	80.61	O
ATOM	8902	N	THR	A	601	14.543	33.532	-9.240	1.00	82.20	N
ATOM	8904	CA	THR	A	601	15.540	32.732	-8.580	1.00	81.19	C
ATOM	8906	CB	THR	A	601	16.394	31.985	-9.643	1.00	82.55	C
ATOM	8908	OG1	THR	A	601	15.581	31.098	-10.403	1.00	81.59	O
ATOM	8910	CG2	THR	A	601	17.362	31.047	-8.992	1.00	82.82	C
ATOM	8914	C	THR	A	601	16.462	33.557	-7.683	1.00	80.12	C
ATOM	8915	O	THR	A	601	17.064	32.984	-6.775	1.00	80.18	O
ATOM	8916	N	TYR	A	602	16.626	34.861	-7.927	1.00	79.32	N
ATOM	8918	CA	TYR	A	602	17.704	35.596	-7.243	1.00	78.82	C
ATOM	8920	CB	TYR	A	602	18.764	35.995	-8.249	1.00	80.35	C
ATOM	8923	CG	TYR	A	602	19.511	34.824	-8.832	1.00	81.46	C
ATOM	8924	CD1	TYR	A	602	19.213	34.362	-10.117	1.00	80.69	C
ATOM	8926	CE1	TYR	A	602	19.887	33.321	-10.666	1.00	81.66	C
ATOM	8928	CZ	TYR	A	602	20.870	32.693	-9.952	1.00	82.09	C
ATOM	8929	OH	TYR	A	602	21.510	31.618	-10.515	1.00	83.96	O
ATOM	8931	CE2	TYR	A	602	21.197	33.123	-8.653	1.00	82.70	C
ATOM	8933	CD2	TYR	A	602	20.518	34.187	-8.110	1.00	80.31	C
ATOM	8935	C	TYR	A	602	17.314	36.830	-6.455	1.00	77.63	C
ATOM	8936	O	TYR	A	602	18.181	37.605	-6.070	1.00	76.60	O
ATOM	8937	N	GLY	A	603	16.021	36.994	-6.190	1.00	77.48	N
ATOM	8939	CA	GLY	A	603	15.508	38.166	-5.496	1.00	76.91	C
ATOM	8942	C	GLY	A	603	15.009	39.185	-6.473	1.00	77.91	C
ATOM	8943	O	GLY	A	603	15.253	39.045	-7.663	1.00	78.71	O
ATOM	8944	N	CYS	A	604	14.312	40.206	-5.982	1.00	78.21	N
ATOM	8946	CA	CYS	A	604	13.738	41.210	-6.882	1.00	79.72	C
ATOM	8948	CB	CYS	A	604	12.418	40.701	-7.464	1.00	80.28	C
ATOM	8951	SG	CYS	A	604	10.973	40.882	-6.410	1.00	81.56	S
ATOM	8952	C	CYS	A	604	13.558	42.674	-6.440	1.00	80.19	C
ATOM	8953	O	CYS	A	604	13.418	43.047	-5.273	1.00	77.79	O
ATOM	8954	N	THR	A	605	13.512	43.461	-7.504	1.00	83.00	N
ATOM	8956	CA	THR	A	605	13.431	44.905	-7.548	1.00	84.81	C
ATOM	8958	CB	THR	A	605	14.006	45.292	-8.941	1.00	87.10	C
ATOM	8960	OG1	THR	A	605	15.372	45.651	-8.743	1.00	89.61	O
ATOM	8962	CG2	THR	A	605	13.337	46.510	-9.660	1.00	90.11	C
ATOM	8966	C	THR	A	605	11.986	45.326	-7.333	1.00	85.27	C
ATOM	8967	O	THR	A	605	11.718	46.227	-6.541	1.00	85.22	O
ATOM	8968	N	GLY	A	606	11.069	44.625	-7.999	1.00	85.73	N
ATOM	8970	CA	GLY	A	606	9.649	44.898	-7.928	1.00	86.94	C
ATOM	8973	C	GLY	A	606	8.783	43.657	-8.124	1.00	86.94	C
ATOM	8974	O	GLY	A	606	9.223	42.537	-7.925	1.00	85.56	O
ATOM	8975	N	PRO	A	607	7.534	43.854	-8.515	1.00	89.16	N
ATOM	8976	CA	PRO	A	607	6.552	42.772	-8.584	1.00	89.64	C
ATOM	8978	CB	PRO	A	607	5.207	43.521	-8.508	1.00	91.72	C
ATOM	8981	CG	PRO	A	607	5.467	44.862	-9.127	1.00	93.44	C
ATOM	8984	CD	PRO	A	607	6.939	45.149	-8.880	1.00	92.13	C
ATOM	8987	C	PRO	A	607	6.562	41.858	-9.835	1.00	90.94	C
ATOM	8988	O	PRO	A	607	6.927	42.251	-10.964	1.00	91.02	O
ATOM	8989	N	GLY	A	608	6.123	40.616	-9.558	1.00	91.39	N
ATOM	8991	CA	GLY	A	608	5.924	39.533	-10.509	1.00	92.22	C
ATOM	8994	C	GLY	A	608	6.989	39.311	-11.589	1.00	92.72	C
ATOM	8995	O	GLY	A	608	8.175	39.081	-11.362	1.00	91.98	O
ATOM	8996	N	LEU	A	609	6.506	39.353	-12.807	1.00	94.71	N
ATOM	8998	CA	LEU	A	609	7.270	39.067	-14.030	1.00	95.05	C
ATOM	9000	CB	LEU	A	609	6.311	39.435	-15.240	1.00	97.40	C

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ATOM 9003  CG  LEU A 609       4.763  39.599 -14.971  1.00 97.53           C
ATOM 9005  CD1 LEU A 609       4.034  40.291 -16.098  1.00 99.87           C
ATOM 9009  CD2 LEU A 609       4.038  38.239 -14.601  1.00 96.75           C
ATOM 9013  C   LEU A 609       8.667  39.823 -14.097  1.00 94.70           C
ATOM 9014  O   LEU A 609       9.722  39.184 -14.227  1.00 92.65           O
ATOM 9015  N   ALA A 610       8.610  41.172 -13.954  1.00 96.08           N
ATOM 9017  CA  ALA A 610       9.684  42.152 -14.257  1.00 96.49           C
ATOM 9019  CB  ALA A 610       9.147  43.190 -15.238  1.00 98.58           C
ATOM 9023  C   ALA A 610      10.302  42.887 -13.030  1.00 95.94           C
ATOM 9024  O   ALA A 610      10.840  43.987 -13.157  1.00 97.11           O
ATOM 9025  N   GLY A 611      10.220  42.304 -11.844  1.00 94.30           N
ATOM 9027  CA  GLY A 611      11.240  42.583 -10.848  1.00 93.78           C
ATOM 9030  C   GLY A 611      12.516  41.826 -11.256  1.00 94.52           C
ATOM 9031  O   GLY A 611      13.637  42.114 -10.819  1.00 93.76           O
ATOM 9032  N   CYS A 612      12.314  40.804 -12.087  1.00 96.55           N
ATOM 9034  CA  CYS A 612      13.377  40.054 -12.743  1.00 97.90           C
ATOM 9036  CB  CYS A 612      12.937  38.613 -12.854  1.00 96.30           C
ATOM 9039  SG  CYS A 612      13.031  37.903 -11.240  1.00 90.82           S
ATOM 9040  C   CYS A 612      13.582  40.653 -14.140  1.00103.59           C
ATOM 9041  O   CYS A 612      12.645  40.648 -14.971  1.00103.99           O
ATOM 9042  N   PRO A 613      14.763  41.243 -14.370  1.00108.80           N
ATOM 9043  CA  PRO A 613      15.182  41.615 -15.726  1.00114.87           C
ATOM 9045  CB  PRO A 613      15.737  43.030 -15.521  1.00114.53           C
ATOM 9048  CG  PRO A 613      16.295  42.984 -14.088  1.00110.83           C
ATOM 9051  CD  PRO A 613      15.772  41.685 -13.378  1.00107.45           C
ATOM 9054  C   PRO A 613      16.262  40.618 -16.273  1.00122.10           C
ATOM 9055  O   PRO A 613      16.937  39.895 -15.470  1.00120.24           O
ATOM 9056  N   THR A 614      16.391  40.617 -17.621  1.00 47.89           N
ATOM 9058  CA  THR A 614      17.198  39.690 -18.467  1.00 53.92           C
ATOM 9060  CB  THR A 614      18.247  38.823 -17.659  1.00 56.51           C
ATOM 9062  OG1 THR A 614      19.340  39.668 -17.217  1.00 58.77           O
ATOM 9064  CG2 THR A 614      18.907  37.587 -18.539  1.00 57.00           C
ATOM 9068  C   THR A 614      16.172  38.798 -19.222  1.00 56.93           C
ATOM 9069  O   THR A 614      15.663  39.166 -20.337  1.00 59.17           O
ATOM 9070  OXT THR A 614      15.847  37.720 -18.669  1.00 59.96           O
ATOM 9071  N   ASP C   1      33.389  65.342  66.616  1.00 67.77           N
ATOM 9073  CA  ASP C   1      33.591  64.060  67.391  1.00 63.04           C
ATOM 9075  CB  ASP C   1      34.960  64.034  68.124  1.00 62.38           C
ATOM 9078  CG  ASP C   1      36.160  63.729  67.215  1.00 63.30           C
ATOM 9079  OD1 ASP C   1      36.329  62.559  66.749  1.00 62.63           O
ATOM 9080  OD2 ASP C   1      37.047  64.606  67.012  1.00 67.23           O
ATOM 9081  C   ASP C   1      32.479  63.876  68.450  1.00 60.60           C
ATOM 9082  O   ASP C   1      31.963  64.812  68.966  1.00 63.19           O
ATOM 9085  N   ILE C   2      32.190  62.647  68.811  1.00 56.23           N
ATOM 9087  CA  ILE C   2      31.119  62.338  69.720  1.00 54.21           C
ATOM 9089  CB  ILE C   2      30.653  60.829  69.431  1.00 51.58           C
ATOM 9091  CG1 ILE C   2      29.523  60.345  70.377  1.00 50.81           C
ATOM 9094  CD1 ILE C   2      28.466  59.526  69.644  1.00 49.41           C
ATOM 9098  CG2 ILE C   2      31.758  59.838  69.497  1.00 46.09           C
ATOM 9102  C   ILE C   2      31.538  62.546  71.167  1.00 52.71           C
ATOM 9103  O   ILE C   2      32.470  61.928  71.639  1.00 50.84           O
ATOM 9104  N   LEU C   3      30.821  63.383  71.886  1.00 54.32           N
ATOM 9106  CA  LEU C   3      31.006  63.509  73.329  1.00 53.38           C
ATOM 9108  CB  LEU C   3      30.547  64.886  73.785  1.00 57.50           C
ATOM 9111  CG  LEU C   3      31.316  66.005  73.123  1.00 61.79           C
ATOM 9113  CD1 LEU C   3      31.128  67.318  73.861  1.00 66.05           C
ATOM 9117  CD2 LEU C   3      32.806  65.586  73.107  1.00 61.67           C
ATOM 9121  C   LEU C   3      30.206  62.515  74.091  1.00 50.57           C
ATOM 9122  O   LEU C   3      29.205  62.077  73.632  1.00 50.19           O
ATOM 9123  N   LEU C   4      30.655  62.200  75.294  1.00 49.48           N
ATOM 9125  CA  LEU C   4      29.977  61.272  76.210  1.00 47.62           C
ATOM 9127  CB  LEU C   4      30.661  59.899  76.270  1.00 44.26           C
ATOM 9130  CG  LEU C   4      30.556  58.903  75.095  1.00 42.54           C
ATOM 9132  CD1 LEU C   4      31.192  57.536  75.461  1.00 42.27           C
ATOM 9136  CD2 LEU C   4      29.161  58.642  74.668  1.00 41.09           C
ATOM 9140  C   LEU C   4      30.102  61.939  77.564  1.00 49.23           C
ATOM 9141  O   LEU C   4      31.203  62.184  78.046  1.00 50.89           O
ATOM 9142  N   THR C   5      28.982  62.206  78.193  1.00 50.08           N
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ATOM 9144  CA  THR C   5      28.925  63.052  79.340  1.00 51.09           C
ATOM 9146  CB  THR C   5      28.023  64.197  78.914  1.00 54.47           C
ATOM 9148  OG1 THR C   5      28.669  64.889  77.847  1.00 54.99           O
ATOM 9150  CG2 THR C   5      27.841  65.257  80.010  1.00 58.10           C
ATOM 9154  C   THR C   5      28.318  62.222  80.455  1.00 50.26           C
ATOM 9155  O   THR C   5      27.173  61.791  80.329  1.00 52.74           O
ATOM 9156  N   GLN C   6      29.054  61.916  81.509  1.00 48.92           N
ATOM 9158  CA  GLN C   6      28.477  61.131  82.612  1.00 48.41           C
ATOM 9160  CB  GLN C   6      29.420  60.029  83.106  1.00 46.13           C
ATOM 9163  CG  GLN C   6      29.841  58.951  82.032  1.00 46.01           C
ATOM 9166  CD  GLN C   6      30.748  57.811  82.605  1.00 42.83           C
ATOM 9167  OE1 GLN C   6      30.341  57.108  83.506  1.00 43.11           O
ATOM 9168  NE2 GLN C   6      31.931  57.649  82.063  1.00 39.15           N
ATOM 9171  C   GLN C   6      28.086  62.057  83.776  1.00 51.15           C
ATOM 9172  O   GLN C   6      28.575  63.185  83.915  1.00 51.19           O
ATOM 9173  N   SER C   7      27.195  61.530  84.618  1.00 52.05           N
ATOM 9175  CA  SER C   7      26.399  62.344  85.524  1.00 55.11           C
ATOM 9177  CB  SER C   7      25.240  62.929  84.689  1.00 57.59           C
ATOM 9180  OG  SER C   7      25.571  64.267  84.306  1.00 63.19           O
ATOM 9182  C   SER C   7      25.843  61.474  86.652  1.00 54.25           C
ATOM 9183  O   SER C   7      25.344  60.419  86.357  1.00 53.75           O
ATOM 9184  N   PRO C   8      25.896  61.871  87.925  1.00 55.03           N
ATOM 9185  CA  PRO C   8      26.657  63.025  88.411  1.00 56.11           C
ATOM 9187  CB  PRO C   8      26.204  63.135  89.865  1.00 57.98           C
ATOM 9190  CG  PRO C   8      25.667  61.770  90.233  1.00 56.40           C
ATOM 9193  CD  PRO C   8      25.101  61.220  88.994  1.00 55.40           C
ATOM 9196  C   PRO C   8      28.134  62.756  88.412  1.00 54.47           C
ATOM 9197  O   PRO C   8      28.565  61.631  88.075  1.00 52.22           O
ATOM 9198  N   VAL C   9      28.908  63.726  88.859  1.00 55.53           N
ATOM 9200  CA  VAL C   9      30.311  63.456  89.017  1.00 55.24           C
ATOM 9202  CB  VAL C   9      31.120  64.738  89.253  1.00 58.63           C
ATOM 9204  CG1 VAL C   9      32.588  64.416  89.781  1.00 58.03           C
ATOM 9208  CG2 VAL C   9      31.166  65.580  87.925  1.00 60.37           C
ATOM 9212  C   VAL C   9      30.574  62.469  90.150  1.00 54.36           C
ATOM 9213  O   VAL C   9      31.400  61.558  89.968  1.00 53.35           O
ATOM 9214  N   ILE C  10      29.927  62.686  91.302  1.00 55.71           N
ATOM 9216  CA  ILE C  10      29.879  61.722  92.418  1.00 55.79           C
ATOM 9218  CB  ILE C  10      30.485  62.359  93.690  1.00 57.92           C
ATOM 9220  CG1 ILE C  10      32.008  62.430  93.602  1.00 59.27           C
ATOM 9223  CD1 ILE C  10      32.638  63.164  94.791  1.00 62.22           C
ATOM 9227  CG2 ILE C  10      30.200  61.541  94.922  1.00 58.67           C
ATOM 9231  C   ILE C  10      28.393  61.258  92.677  1.00 57.07           C
ATOM 9232  O   ILE C  10      27.464  62.062  92.664  1.00 60.01           O
ATOM 9233  N   LEU C  11      28.137  59.983  92.929  1.00 55.55           N
ATOM 9235  CA  LEU C  11      26.769  59.588  93.190  1.00 56.88           C
ATOM 9237  CB  LEU C  11      26.419  58.508  92.202  1.00 54.80           C
ATOM 9240  CG  LEU C  11      25.025  57.907  92.195  1.00 55.67           C
ATOM 9242  CD1 LEU C  11      24.004  58.957  92.115  1.00 58.93           C
ATOM 9246  CD2 LEU C  11      24.914  56.991  90.986  1.00 54.73           C
ATOM 9250  C   LEU C  11      26.688  59.068  94.620  1.00 59.06           C
ATOM 9251  O   LEU C  11      27.287  58.041  94.901  1.00 59.11           O
ATOM 9252  N   SER C  12      26.023  59.782  95.533  1.00 61.71           N
ATOM 9254  CA  SER C  12      26.005  59.382  96.956  1.00 63.27           C
ATOM 9256  CB  SER C  12      26.214  60.556  97.941  1.00 65.33           C
ATOM 9259  OG  SER C  12      27.431  61.153  97.699  1.00 63.03           O
ATOM 9261  C   SER C  12      24.681  58.744  97.285  1.00 64.64           C
ATOM 9262  O   SER C  12      23.656  59.375  97.191  1.00 66.78           O
ATOM 9263  N   VAL C  13      24.750  57.540  97.814  1.00 64.40           N
ATOM 9265  CA  VAL C  13      23.657  56.618  97.810  1.00 65.81           C
ATOM 9267  CB  VAL C  13      23.891  55.757  96.586  1.00 63.63           C
ATOM 9269  CG1 VAL C  13      23.223  54.454  96.715  1.00 66.53           C
ATOM 9273  CG2 VAL C  13      23.399  56.484  95.355  1.00 64.60           C
ATOM 9277  C   VAL C  13      23.712  55.741  99.037  1.00 66.60           C
ATOM 9278  O   VAL C  13      24.785  55.268  99.380  1.00 64.51           O
ATOM 9279  N   SER C  14      22.579  55.475  99.680  1.00 69.64           N
ATOM 9281  CA  SER C  14      22.601  54.560 100.836  1.00 72.09           C
ATOM 9283  CB  SER C  14      21.478  54.804 101.839  1.00 76.76           C
ATOM 9286  OG  SER C  14      20.810  56.030 101.609  1.00 79.16           O
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ATOM	9288	C	SER	C	14	22.599	53.119	100.356	1.00	70.71	C
ATOM	9289	O	SER	C	14	22.149	52.842	99.275	1.00	68.37	O
ATOM	9290	N	PRO	C	15	23.152	52.211	101.149	1.00	72.08	N
ATOM	9291	CA	PRO	C	15	23.353	50.835	100.735	1.00	71.76	C
ATOM	9293	CB	PRO	C	15	24.297	50.294	101.808	1.00	73.08	C
ATOM	9296	CG	PRO	C	15	23.978	51.010	102.986	1.00	76.10	C
ATOM	9299	CD	PRO	C	15	23.611	52.399	102.530	1.00	74.92	C
ATOM	9302	C	PRO	C	15	22.056	50.082	100.765	1.00	75.00	C
ATOM	9303	O	PRO	C	15	21.340	50.172	101.721	1.00	79.23	O
ATOM	9304	N	GLY	C	16	21.755	49.355	99.712	1.00	74.43	N
ATOM	9306	CA	GLY	C	16	20.459	48.743	99.583	1.00	77.95	C
ATOM	9309	C	GLY	C	16	19.586	49.408	98.540	1.00	77.45	C
ATOM	9310	O	GLY	C	16	18.688	48.741	98.034	1.00	80.57	O
ATOM	9311	N	GLU	C	17	19.809	50.673	98.194	1.00	75.10	N
ATOM	9313	CA	GLU	C	17	18.992	51.329	97.158	1.00	74.75	C
ATOM	9315	CB	GLU	C	17	19.245	52.794	97.143	1.00	73.81	C
ATOM	9318	CG	GLU	C	17	18.823	53.497	98.389	1.00	79.22	C
ATOM	9321	CD	GLU	C	17	18.808	54.995	98.145	1.00	79.79	C
ATOM	9322	OE1	GLU	C	17	19.851	55.616	97.710	1.00	69.50	O
ATOM	9323	OE2	GLU	C	17	17.681	55.505	98.369	1.00	88.18	O
ATOM	9324	C	GLU	C	17	19.231	50.930	95.713	1.00	71.55	C
ATOM	9325	O	GLU	C	17	20.338	50.462	95.351	1.00	66.99	O
ATOM	9326	N	ALA	C	18	18.177	51.167	94.895	1.00	72.93	N
ATOM	9328	CA	ALA	C	18	18.342	51.297	93.452	1.00	69.72	C
ATOM	9330	CB	ALA	C	18	17.040	51.182	92.640	1.00	70.80	C
ATOM	9334	C	ALA	C	18	19.087	52.642	93.212	1.00	67.33	C
ATOM	9335	O	ALA	C	18	18.731	53.667	93.755	1.00	69.28	O
ATOM	9336	N	VAL	C	19	20.151	52.542	92.424	1.00	63.49	N
ATOM	9338	CA	VAL	C	19	21.005	53.594	91.948	1.00	61.76	C
ATOM	9340	CB	VAL	C	19	22.441	53.202	92.367	1.00	59.76	C
ATOM	9342	CG1	VAL	C	19	23.474	54.131	91.797	1.00	57.51	C
ATOM	9346	CG2	VAL	C	19	22.521	53.203	93.815	1.00	62.73	C
ATOM	9350	C	VAL	C	19	21.059	53.596	90.416	1.00	59.34	C
ATOM	9351	O	VAL	C	19	21.188	52.538	89.832	1.00	59.40	O
ATOM	9352	N	SER	C	20	21.053	54.764	89.776	1.00	57.96	N
ATOM	9354	CA	SER	C	20	21.205	54.860	88.333	1.00	55.03	C
ATOM	9356	CB	SER	C	20	20.027	55.545	87.683	1.00	57.01	C
ATOM	9359	OG	SER	C	20	18.851	54.897	88.037	1.00	61.60	O
ATOM	9361	C	SER	C	20	22.528	55.767	88.035	1.00	53.24	C
ATOM	9362	O	SER	C	20	22.254	56.879	88.497	1.00	54.65	O
ATOM	9363	N	PHE	C	21	23.257	55.326	87.212	1.00	50.84	N
ATOM	9365	CA	PHE	C	21	24.247	56.198	86.595	1.00	48.38	C
ATOM	9367	CB	PHE	C	21	25.592	55.519	86.453	1.00	46.09	C
ATOM	9370	CG	PHE	C	21	26.047	54.812	87.647	1.00	47.07	C
ATOM	9371	CD1	PHE	C	21	25.631	53.517	87.880	1.00	50.09	C
ATOM	9373	CE1	PHE	C	21	26.041	52.843	88.956	1.00	50.03	C
ATOM	9375	CZ	PHE	C	21	26.878	53.444	89.804	1.00	52.96	C
ATOM	9377	CE2	PHE	C	21	27.326	54.751	89.576	1.00	52.36	C
ATOM	9379	CD2	PHE	C	21	26.921	55.399	88.494	1.00	49.70	C
ATOM	9381	C	PHE	C	21	23.797	56.492	85.203	1.00	47.89	C
ATOM	9382	O	PHE	C	21	23.140	55.681	84.629	1.00	47.93	O
ATOM	9383	N	SER	C	22	24.198	57.626	84.646	1.00	48.25	N
ATOM	9385	CA	SER	C	22	23.802	58.025	83.317	1.00	49.61	C
ATOM	9387	CB	SER	C	22	22.694	59.023	83.416	1.00	53.37	C
ATOM	9390	OG	SER	C	22	23.123	59.992	84.294	1.00	55.34	O
ATOM	9392	C	SER	C	22	24.848	58.684	82.473	1.00	49.38	C
ATOM	9393	O	SER	C	22	25.692	59.451	82.980	1.00	51.10	O
ATOM	9394	N	CYS	C	23	24.693	58.465	81.165	1.00	49.64	N
ATOM	9396	CA	CYS	C	23	25.639	58.792	80.105	1.00	49.37	C
ATOM	9398	CB	CYS	C	23	26.354	57.470	79.749	1.00	47.09	C
ATOM	9401	SG	CYS	C	23	27.565	57.489	78.438	1.00	48.27	S
ATOM	9402	C	CYS	C	23	24.845	59.312	78.891	1.00	51.54	C
ATOM	9403	O	CYS	C	23	23.923	58.637	78.433	1.00	51.51	O
ATOM	9404	N	ARG	C	24	25.162	60.511	78.383	1.00	53.04	N
ATOM	9406	CA	ARG	C	24	24.403	61.116	77.240	1.00	54.66	C
ATOM	9408	CB	ARG	C	24	23.681	62.434	77.585	1.00	56.60	C
ATOM	9417	C	ARG	C	24	25.410	61.393	76.163	1.00	53.77	C
ATOM	9418	O	ARG	C	24	26.331	62.193	76.410	1.00	55.68	O

ATOM	9419	N	ALA	C	25	25.276	60.747	75.000	1.00	51.76	N
ATOM	9421	CA	ALA	C	25	26.118	61.042	73.835	1.00	50.58	C
ATOM	9423	CB	ALA	C	25	26.241	59.816	72.982	1.00	48.78	C
ATOM	9427	C	ALA	C	25	25.591	62.193	73.012	1.00	53.60	C
ATOM	9428	O	ALA	C	25	24.412	62.317	72.863	1.00	56.32	O
ATOM	9429	N	SER	C	26	26.483	63.018	72.497	1.00	54.27	N
ATOM	9431	CA	SER	C	26	26.146	64.197	71.725	1.00	59.13	C
ATOM	9433	CB	SER	C	26	27.425	64.981	71.463	1.00	59.86	C
ATOM	9436	OG	SER	C	26	28.278	64.302	70.552	1.00	59.91	O
ATOM	9438	C	SER	C	26	25.446	63.922	70.377	1.00	61.50	C
ATOM	9439	O	SER	C	26	24.883	64.864	69.768	1.00	66.20	O
ATOM	9440	N	GLN	C	27	25.529	62.670	69.901	1.00	58.24	N
ATOM	9442	CA	GLN	C	27	24.827	62.225	68.706	1.00	60.10	C
ATOM	9444	CB	GLN	C	27	25.688	62.296	67.470	1.00	59.83	C
ATOM	9447	CG	GLN	C	27	27.081	62.008	67.716	1.00	58.23	C
ATOM	9450	CD	GLN	C	27	27.918	61.992	66.456	1.00	60.02	C
ATOM	9451	OE1	GLN	C	27	28.552	62.988	66.171	1.00	62.47	O
ATOM	9452	NE2	GLN	C	27	27.924	60.869	65.701	1.00	58.88	N
ATOM	9455	C	GLN	C	27	24.312	60.827	68.888	1.00	57.93	C
ATOM	9456	O	GLN	C	27	24.902	60.058	69.598	1.00	53.57	O
ATOM	9457	N	SER	C	28	23.165	60.527	68.271	1.00	61.55	N
ATOM	9459	CA	SER	C	28	22.408	59.316	68.582	1.00	60.90	C
ATOM	9461	CB	SER	C	28	20.945	59.423	68.203	1.00	65.18	C
ATOM	9464	OG	SER	C	28	20.591	58.143	67.697	1.00	66.79	O
ATOM	9466	C	SER	C	28	23.004	58.084	67.889	1.00	58.36	C
ATOM	9467	O	SER	C	28	23.256	58.074	66.663	1.00	60.09	O
ATOM	9468	N	ILE	C	29	23.131	57.029	68.691	1.00	54.91	N
ATOM	9470	CA	ILE	C	29	24.081	55.941	68.499	1.00	50.73	C
ATOM	9472	CB	ILE	C	29	24.939	56.025	69.690	1.00	48.76	C
ATOM	9474	CG1	ILE	C	29	26.204	56.799	69.506	1.00	47.90	C
ATOM	9477	CD1	ILE	C	29	26.781	56.887	71.020	1.00	46.20	C
ATOM	9481	CG2	ILE	C	29	25.406	54.716	70.140	1.00	50.42	C
ATOM	9485	C	ILE	C	29	23.419	54.538	68.588	1.00	48.53	C
ATOM	9486	O	ILE	C	29	24.082	53.548	68.607	1.00	45.78	O
ATOM	9487	N	GLY	C	30	22.128	54.442	68.772	1.00	50.20	N
ATOM	9489	CA	GLY	C	30	21.526	53.158	68.932	1.00	49.68	C
ATOM	9492	C	GLY	C	30	21.768	52.584	70.304	1.00	48.73	C
ATOM	9493	O	GLY	C	30	21.368	53.115	71.357	1.00	48.59	O
ATOM	9494	N	THR	C	31	22.462	51.467	70.275	1.00	47.96	N
ATOM	9496	CA	THR	C	31	22.650	50.599	71.412	1.00	47.77	C
ATOM	9498	CB	THR	C	31	22.033	49.252	71.008	1.00	50.14	C
ATOM	9500	OG1	THR	C	31	20.656	49.459	70.720	1.00	56.14	O
ATOM	9502	CG2	THR	C	31	21.894	48.337	72.170	1.00	52.95	C
ATOM	9506	C	THR	C	31	24.137	50.455	71.595	1.00	44.48	C
ATOM	9507	O	THR	C	31	24.637	49.717	72.445	1.00	42.22	O
ATOM	9508	N	ASN	C	32	24.885	51.149	70.758	1.00	43.47	N
ATOM	9510	CA	ASN	C	32	26.288	50.870	70.721	1.00	41.11	C
ATOM	9512	CB	ASN	C	32	26.825	51.306	69.381	1.00	41.94	C
ATOM	9515	CG	ASN	C	32	26.386	50.392	68.282	1.00	43.35	C
ATOM	9516	OD1	ASN	C	32	26.176	49.129	68.474	1.00	38.32	O
ATOM	9517	ND2	ASN	C	32	26.245	51.004	67.090	1.00	43.19	N
ATOM	9520	C	ASN	C	32	27.059	51.545	71.863	1.00	39.52	C
ATOM	9521	O	ASN	C	32	27.910	52.433	71.610	1.00	37.18	O
ATOM	9522	N	ILE	C	33	26.740	51.112	73.093	1.00	39.04	N
ATOM	9524	CA	ILE	C	33	27.444	51.546	74.289	1.00	38.42	C
ATOM	9526	CB	ILE	C	33	26.556	52.547	75.003	1.00	40.72	C
ATOM	9528	CG1	ILE	C	33	27.221	53.922	74.939	1.00	43.37	C
ATOM	9531	CD1	ILE	C	33	26.172	54.854	74.384	1.00	49.43	C
ATOM	9535	CG2	ILE	C	33	26.295	52.247	76.459	1.00	41.18	C
ATOM	9539	C	ILE	C	33	27.769	50.425	75.211	1.00	36.61	C
ATOM	9540	O	ILE	C	33	26.935	49.529	75.421	1.00	38.59	O
ATOM	9541	N	HIS	C	34	28.925	50.499	75.846	1.00	34.61	N
ATOM	9543	CA	HIS	C	34	29.162	49.613	76.966	1.00	34.71	C
ATOM	9545	CB	HIS	C	34	30.200	48.643	76.574	1.00	33.97	C
ATOM	9548	CG	HIS	C	34	30.194	48.311	75.141	1.00	34.26	C
ATOM	9549	ND1	HIS	C	34	29.367	47.348	74.630	1.00	38.92	N
ATOM	9551	CE1	HIS	C	34	29.607	47.205	73.339	1.00	38.14	C
ATOM	9553	NE2	HIS	C	34	30.540	48.071	72.995	1.00	37.85	N

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ATOM 9555  CD2 HIS C  34      30.930  48.773  74.108  1.00 34.95           C
ATOM 9557  C   HIS C  34      29.522  50.260  78.342  1.00 34.32           C
ATOM 9558  O   HIS C  34      29.807  51.432  78.392  1.00 33.64           O
ATOM 9559  N   TRP C  35      29.445  49.465  79.426  1.00 34.27           N
ATOM 9561  CA  TRP C  35      29.783  49.896  80.759  1.00 34.35           C
ATOM 9563  CB  TRP C  35      28.560  49.879  81.571  1.00 35.41           C
ATOM 9566  CG  TRP C  35      27.514  50.870  81.176  1.00 38.77           C
ATOM 9567  CD1 TRP C  35      26.443  50.635  80.362  1.00 38.77           C
ATOM 9569  NE1 TRP C  35      25.680  51.764  80.262  1.00 39.07           N
ATOM 9571  CE2 TRP C  35      26.201  52.740  81.058  1.00 39.78           C
ATOM 9572  CD2 TRP C  35      27.353  52.211  81.662  1.00 37.48           C
ATOM 9573  CE3 TRP C  35      28.075  53.018  82.501  1.00 34.96           C
ATOM 9575  CZ3 TRP C  35      27.628  54.293  82.738  1.00 38.38           C
ATOM 9577  CH2 TRP C  35      26.484  54.789  82.138  1.00 41.25           C
ATOM 9579  CZ2 TRP C  35      25.744  54.022  81.306  1.00 42.46           C
ATOM 9581  C   TRP C  35      30.803  49.082  81.568  1.00 34.40           C
ATOM 9582  O   TRP C  35      30.787  47.871  81.643  1.00 34.68           O
ATOM 9583  N   TYR C  36      31.619  49.809  82.295  1.00 34.73           N
ATOM 9585  CA  TYR C  36      32.679  49.273  83.080  1.00 34.84           C
ATOM 9587  CB  TYR C  36      33.979  49.790  82.457  1.00 33.85           C
ATOM 9590  CG  TYR C  36      34.192  49.428  81.000  1.00 32.89           C
ATOM 9591  CD1 TYR C  36      33.730  50.226  79.935  1.00 34.08           C
ATOM 9593  CE1 TYR C  36      33.954  49.861  78.569  1.00 30.47           C
ATOM 9595  CZ  TYR C  36      34.628  48.702  78.318  1.00 33.75           C
ATOM 9596  OH  TYR C  36      34.972  48.211  77.099  1.00 32.78           O
ATOM 9598  CE2 TYR C  36      35.081  47.932  79.350  1.00 36.07           C
ATOM 9600  CD2 TYR C  36      34.855  48.298  80.683  1.00 34.48           C
ATOM 9602  C   TYR C  36      32.638  49.720  84.560  1.00 36.53           C
ATOM 9603  O   TYR C  36      32.184  50.821  84.911  1.00 37.45           O
ATOM 9604  N   GLN C  37      33.181  48.875  85.422  1.00 37.01           N
ATOM 9606  CA  GLN C  37      33.485  49.253  86.776  1.00 37.99           C
ATOM 9608  CB  GLN C  37      32.866  48.245  87.662  1.00 40.20           C
ATOM 9611  CG  GLN C  37      33.024  48.454  89.097  1.00 43.44           C
ATOM 9614  CD  GLN C  37      32.484  47.260  89.850  1.00 44.50           C
ATOM 9615  OE1 GLN C  37      33.095  46.188  89.830  1.00 41.97           O
ATOM 9616  NE2 GLN C  37      31.341  47.450  90.519  1.00 45.99           N
ATOM 9619  C   GLN C  37      34.971  49.202  86.950  1.00 38.04           C
ATOM 9620  O   GLN C  37      35.576  48.347  86.420  1.00 37.13           O
ATOM 9621  N   GLN C  38      35.532  50.155  87.691  1.00 39.43           N
ATOM 9623  CA  GLN C  38      36.916  50.233  88.006  1.00 40.11           C
ATOM 9625  CB  GLN C  38      37.572  51.356  87.212  1.00 40.00           C
ATOM 9628  CG  GLN C  38      39.138  51.282  87.328  1.00 41.59           C
ATOM 9631  CD  GLN C  38      39.903  52.189  86.386  1.00 39.71           C
ATOM 9632  OE1 GLN C  38      40.911  51.749  85.818  1.00 39.37           O
ATOM 9633  NE2 GLN C  38      39.488  53.456  86.280  1.00 36.17           N
ATOM 9636  C   GLN C  38      37.025  50.536  89.490  1.00 42.44           C
ATOM 9637  O   GLN C  38      36.535  51.554  89.948  1.00 43.21           O
ATOM 9638  N   ARG C  39      37.659  49.658  90.248  1.00 43.81           N
ATOM 9640  CA  ARG C  39      37.854  49.916  91.649  1.00 46.05           C
ATOM 9642  CB  ARG C  39      37.775  48.654  92.479  1.00 47.38           C
ATOM 9645  CG  ARG C  39      36.378  48.003  92.388  1.00 47.92           C
ATOM 9648  CD  ARG C  39      36.268  46.636  93.005  1.00 49.95           C
ATOM 9651  NE  ARG C  39      34.888  46.233  93.235  1.00 51.18           N
ATOM 9653  CZ  ARG C  39      34.457  44.976  93.111  1.00 53.33           C
ATOM 9654  NH1 ARG C  39      35.280  44.025  92.746  1.00 55.36           N
ATOM 9657  NH2 ARG C  39      33.198  44.656  93.305  1.00 54.57           N
ATOM 9660  C   ARG C  39      39.227  50.474  91.698  1.00 48.48           C
ATOM 9661  O   ARG C  39      40.076  50.144  90.848  1.00 48.36           O
ATOM 9662  N   THR C  40      39.446  51.325  92.696  1.00 50.49           N
ATOM 9664  CA  THR C  40      40.767  51.785  93.054  1.00 52.37           C
ATOM 9666  CB  THR C  40      40.743  52.104  94.505  1.00 54.92           C
ATOM 9668  OG1 THR C  40      39.665  53.023  94.716  1.00 55.56           O
ATOM 9670  CG2 THR C  40      41.930  52.878  94.904  1.00 57.62           C
ATOM 9674  C   THR C  40      41.826  50.749  92.731  1.00 53.36           C
ATOM 9675  O   THR C  40      41.665  49.544  93.025  1.00 54.89           O
ATOM 9676  N   ASN C  41      42.870  51.206  92.053  1.00 52.76           N
ATOM 9678  CA  ASN C  41      44.015  50.359  91.762  1.00 54.22           C
ATOM 9680  CB  ASN C  41      44.688  49.980  93.075  1.00 58.44           C
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ATOM 9683  CG  ASN C  41      45.154  51.230  93.865  1.00 63.41           C
ATOM 9684  OD1 ASN C  41      45.183  52.360  93.337  1.00 62.65           O
ATOM 9685  ND2 ASN C  41      45.482  51.031  95.136  1.00 66.15           N
ATOM 9688  C   ASN C  41      43.781  49.126  90.892  1.00 51.30           C
ATOM 9689  O   ASN C  41      44.628  48.262  90.811  1.00 52.22           O
ATOM 9690  N   GLY C  42      42.667  49.105  90.189  1.00 47.41           N
ATOM 9692  CA  GLY C  42      42.301  47.978  89.359  1.00 46.02           C
ATOM 9695  C   GLY C  42      42.014  48.314  87.911  1.00 43.20           C
ATOM 9696  O   GLY C  42      41.863  49.478  87.503  1.00 41.61           O
ATOM 9697  N   SER C  43      41.944  47.296  87.084  1.00 42.43           N
ATOM 9699  CA  SER C  43      41.710  47.632  85.715  1.00 41.19           C
ATOM 9701  CB  SER C  43      42.475  46.773  84.770  1.00 41.96           C
ATOM 9704  OG  SER C  43      42.809  45.525  85.299  1.00 46.75           O
ATOM 9706  C   SER C  43      40.215  47.594  85.505  1.00 39.79           C
ATOM 9707  O   SER C  43      39.487  47.122  86.353  1.00 41.05           O
ATOM 9708  N   PRO C  44      39.700  48.223  84.476  1.00 38.34           N
ATOM 9709  CA  PRO C  44      38.252  48.202  84.306  1.00 37.29           C
ATOM 9711  CB  PRO C  44      37.996  49.170  83.120  1.00 36.21           C
ATOM 9714  CG  PRO C  44      39.228  49.834  82.904  1.00 37.50           C
ATOM 9717  CD  PRO C  44      40.363  49.045  83.467  1.00 38.27           C
ATOM 9720  C   PRO C  44      37.665  46.810  84.093  1.00 35.59           C
ATOM 9721  O   PRO C  44      38.311  45.834  83.755  1.00 36.62           O
ATOM 9722  N   ARG C  45      36.390  46.753  84.321  1.00 34.62           N
ATOM 9724  CA  ARG C  45      35.656  45.514  84.232  1.00 35.68           C
ATOM 9726  CB  ARG C  45      35.337  45.068  85.609  1.00 37.79           C
ATOM 9729  CG  ARG C  45      34.555  43.888  85.738  1.00 38.23           C
ATOM 9732  CD  ARG C  45      34.072  43.791  87.116  1.00 42.83           C
ATOM 9735  NE  ARG C  45      33.417  42.512  87.398  1.00 49.92           N
ATOM 9737  CZ  ARG C  45      32.649  42.276  88.461  1.00 48.72           C
ATOM 9738  NH1 ARG C  45      32.478  43.244  89.332  1.00 42.80           N
ATOM 9741  NH2 ARG C  45      32.061  41.070  88.622  1.00 53.29           N
ATOM 9744  C   ARG C  45      34.371  45.749  83.473  1.00 34.81           C
ATOM 9745  O   ARG C  45      33.579  46.617  83.770  1.00 34.72           O
ATOM 9746  N   LEU C  46      34.174  44.950  82.464  1.00 35.29           N
ATOM 9748  CA  LEU C  46      33.028  45.109  81.603  1.00 34.83           C
ATOM 9750  CB  LEU C  46      33.294  44.349  80.299  1.00 34.21           C
ATOM 9753  CG  LEU C  46      32.122  44.073  79.436  1.00 33.10           C
ATOM 9755  CD1 LEU C  46      31.697  45.418  78.882  1.00 34.82           C
ATOM 9759  CD2 LEU C  46      32.515  43.060  78.411  1.00 33.01           C
ATOM 9763  C   LEU C  46      31.824  44.529  82.356  1.00 36.54           C
ATOM 9764  O   LEU C  46      31.892  43.392  82.806  1.00 38.07           O
ATOM 9765  N   LEU C  47      30.782  45.344  82.478  1.00 36.50           N
ATOM 9767  CA  LEU C  47      29.501  45.034  83.164  1.00 39.21           C
ATOM 9769  CB  LEU C  47      29.061  46.227  83.993  1.00 39.56           C
ATOM 9772  CG  LEU C  47      30.000  46.623  85.085  1.00 39.66           C
ATOM 9774  CD1 LEU C  47      29.636  47.995  85.413  1.00 40.73           C
ATOM 9778  CD2 LEU C  47      29.808  45.699  86.273  1.00 43.21           C
ATOM 9782  C   LEU C  47      28.293  44.773  82.237  1.00 39.13           C
ATOM 9783  O   LEU C  47      27.510  43.838  82.443  1.00 41.74           O
ATOM 9784  N   ILE C  48      28.172  45.648  81.243  1.00 36.93           N
ATOM 9786  CA  ILE C  48      27.142  45.636  80.277  1.00 37.02           C
ATOM 9788  CB  ILE C  48      26.072  46.575  80.758  1.00 38.96           C
ATOM 9790  CG1 ILE C  48      25.469  45.944  82.022  1.00 42.23           C
ATOM 9793  CD1 ILE C  48      24.088  45.977  82.163  1.00 43.44           C
ATOM 9797  CG2 ILE C  48      25.048  46.823  79.629  1.00 41.51           C
ATOM 9801  C   ILE C  48      27.663  46.061  78.952  1.00 34.72           C
ATOM 9802  O   ILE C  48      28.368  47.060  78.847  1.00 33.27           O
ATOM 9803  N   LYS C  49      27.288  45.296  77.927  1.00 35.49           N
ATOM 9805  CA  LYS C  49      27.566  45.597  76.514  1.00 33.86           C
ATOM 9807  CB  LYS C  49      28.333  44.450  75.916  1.00 33.07           C
ATOM 9810  CG  LYS C  49      27.661  43.106  76.022  1.00 38.02           C
ATOM 9813  CD  LYS C  49      28.443  42.066  75.280  1.00 39.19           C
ATOM 9816  CE  LYS C  49      27.679  41.455  74.125  1.00 40.58           C
ATOM 9819  NZ  LYS C  49      28.697  40.846  73.223  1.00 41.24           N
ATOM 9823  C   LYS C  49      26.249  45.889  75.720  1.00 34.77           C
ATOM 9824  O   LYS C  49      25.183  45.350  75.981  1.00 35.85           O
ATOM 9825  N   TYR C  50      26.335  46.780  74.771  1.00 33.83           N
ATOM 9827  CA  TYR C  50      25.191  47.100  73.987  1.00 37.51           C
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ATOM 9829  CB  TYR C  50      24.878  46.016  72.959  1.00 38.19           C
ATOM 9832  CG  TYR C  50      26.067  45.851  72.028  1.00 38.64           C
ATOM 9833  CD1 TYR C  50      26.984  44.826  72.216  1.00 37.12           C
ATOM 9835  CE1 TYR C  50      28.076  44.706  71.409  1.00 33.93           C
ATOM 9837  CZ  TYR C  50      28.306  45.624  70.421  1.00 32.98           C
ATOM 9838  OH  TYR C  50      29.410  45.521  69.616  1.00 34.60           O
ATOM 9840  CE2 TYR C  50      27.482  46.665  70.239  1.00 34.65           C
ATOM 9842  CD2 TYR C  50      26.363  46.797  71.037  1.00 38.98           C
ATOM 9844  C   TYR C  50      24.314  47.451  74.872  1.00 40.75           C
ATOM 9845  O   TYR C  50      22.900  46.896  74.766  1.00 42.82           O
ATOM 9846  N   ALA C  51      24.282  48.432  75.747  1.00 40.74           N
ATOM 9848  CA  ALA C  51      23.233  49.188  76.446  1.00 41.98           C
ATOM 9850  CB  ALA C  51      22.286  49.720  75.487  1.00 42.55           C
ATOM 9854  C   ALA C  51      22.556  48.363  77.536  1.00 43.53           C
ATOM 9855  O   ALA C  51      22.440  48.796  78.673  1.00 43.80           O
ATOM 9856  N   SER C  52      22.203  47.139  77.210  1.00 44.89           N
ATOM 9858  CA  SER C  52      21.403  46.352  78.108  1.00 48.67           C
ATOM 9860  CB  SER C  52      19.959  46.450  77.643  1.00 52.04           C
ATOM 9863  OG  SER C  52      19.845  45.977  76.294  1.00 53.55           O
ATOM 9865  C   SER C  52      21.783  44.880  78.181  1.00 48.92           C
ATOM 9866  O   SER C  52      21.086  44.131  78.910  1.00 50.69           O
ATOM 9867  N   GLU C  53      22.858  44.477  77.491  1.00 46.03           N
ATOM 9869  CA  GLU C  53      23.166  43.060  77.423  1.00 47.67           C
ATOM 9871  CB  GLU C  53      23.704  42.543  76.064  1.00 46.94           C
ATOM 9874  CG  GLU C  53      22.938  42.960  74.829  1.00 49.55           C
ATOM 9877  CD  GLU C  53      23.501  42.450  73.448  1.00 51.85           C
ATOM 9878  OE1 GLU C  53      24.687  41.939  73.270  1.00 43.43           O
ATOM 9879  OE2 GLU C  53      22.655  42.572  72.483  1.00 57.14           O
ATOM 9880  C   GLU C  53      24.150  42.708  78.518  1.00 46.50           C
ATOM 9881  O   GLU C  53      25.307  43.167  78.557  1.00 42.83           O
ATOM 9882  N   SER C  54      23.689  41.775  79.342  1.00 49.02           N
ATOM 9884  CA  SER C  54      24.458  41.304  80.479  1.00 49.21           C
ATOM 9886  CB  SER C  54      23.589  40.467  81.346  1.00 52.35           C
ATOM 9889  OG  SER C  54      23.295  39.351  80.585  1.00 56.61           O
ATOM 9891  C   SER C  54      25.636  40.452  80.034  1.00 46.98           C
ATOM 9892  O   SER C  54      25.625  39.895  78.944  1.00 45.39           O
ATOM 9893  N   ILE C  55      26.611  40.392  80.941  1.00 45.65           N
ATOM 9895  CA  ILE C  55      27.878  39.764  80.739  1.00 44.10           C
ATOM 9897  CB  ILE C  55      28.910  40.806  80.912  1.00 40.90           C
ATOM 9899  CG1 ILE C  55      29.119  41.482  79.584  1.00 40.37           C
ATOM 9902  CD1 ILE C  55      29.086  42.819  79.727  1.00 42.31           C
ATOM 9906  CG2 ILE C  55      30.195  40.224  81.246  1.00 42.13           C
ATOM 9910  C   ILE C  55      28.092  38.693  81.748  1.00 47.09           C
ATOM 9911  O   ILE C  55      27.684  38.816  82.892  1.00 49.47           O
ATOM 9912  N   SER C  56      28.746  37.611  81.384  1.00 48.71           N
ATOM 9914  CA  SER C  56      28.702  36.538  82.343  1.00 52.52           C
ATOM 9916  CB  SER C  56      28.994  35.174  81.716  1.00 54.74           C
ATOM 9919  OG  SER C  56      30.317  34.847  82.071  1.00 57.29           O
ATOM 9921  C   SER C  56      29.657  36.960  83.473  1.00 51.73           C
ATOM 9922  O   SER C  56      30.536  37.820  83.277  1.00 48.86           O
ATOM 9923  N   GLY C  57      29.442  36.398  84.659  1.00 54.10           N
ATOM 9925  CA  GLY C  57      30.238  36.705  85.830  1.00 53.98           C
ATOM 9928  C   GLY C  57      29.779  37.965  86.529  1.00 52.14           C
ATOM 9929  O   GLY C  57      30.328  38.382  87.538  1.00 52.51           O
ATOM 9930  N   ILE C  58      28.756  38.598  86.015  1.00 50.75           N
ATOM 9932  CA  ILE C  58      28.314  39.794  86.658  1.00 49.91           C
ATOM 9934  CB  ILE C  58      28.314  40.938  85.671  1.00 46.82           C
ATOM 9936  CG1 ILE C  58      29.765  41.294  85.421  1.00 45.06           C
ATOM 9939  CD1 ILE C  58      29.908  41.654  84.172  1.00 45.24           C
ATOM 9943  CG2 ILE C  58      27.517  42.240  86.215  1.00 45.62           C
ATOM 9947  C   ILE C  58      26.990  39.664  87.360  1.00 53.05           C
ATOM 9948  O   ILE C  58      25.977  39.199  86.799  1.00 53.28           O
ATOM 9949  N   PRO C  59      27.025  40.124  88.607  1.00 54.73           N
ATOM 9950  CA  PRO C  59      25.850  40.053  89.461  1.00 58.09           C
ATOM 9952  CB  PRO C  59      26.262  40.797  90.748  1.00 58.25           C
ATOM 9955  CG  PRO C  59      27.651  41.330  90.560  1.00 55.53           C
ATOM 9958  CD  PRO C  59      28.183  40.749  89.287  1.00 53.29           C
ATOM 9961  C   PRO C  59      24.629  40.652  88.749  1.00 57.82           C
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ATOM  9962  O   PRO C  59      24.644  41.654  88.035  1.00 53.30           O
ATOM  9963  N   SER C  60      23.562  39.887  88.909  1.00 63.33           N
ATOM  9965  CA  SER C  60      22.219  40.188  88.390  1.00 65.73           C
ATOM  9967  CB  SER C  60      21.267  39.142  88.972  1.00 71.17           C
ATOM  9970  OG  SER C  60      21.740  38.742  90.265  1.00 74.60           O
ATOM  9972  C   SER C  60      21.779  41.655  88.744  1.00 64.64           C
ATOM  9973  O   SER C  60      21.114  42.343  87.979  1.00 64.25           O
ATOM  9974  N   ARG C  61      22.185  42.151  89.894  1.00 64.61           N
ATOM  9976  CA  ARG C  61      21.829  43.513  90.261  1.00 63.48           C
ATOM  9978  CB  ARG C  61      22.297  43.845  91.663  1.00 64.21           C
ATOM  9981  CG  ARG C  61      23.414  43.056  92.181  1.00 63.18           C
ATOM  9984  CD  ARG C  61      24.104  43.802  93.236  1.00 63.84           C
ATOM  9987  NE  ARG C  61      25.537  43.714  93.099  1.00 61.19           N
ATOM  9989  CZ  ARG C  61      26.362  43.963  94.043  1.00 58.51           C
ATOM  9990  NH1 ARG C  61      25.979  44.372  95.210  1.00 68.13           N
ATOM  9993  NH2 ARG C  61      27.590  43.835  93.832  1.00 58.31           N
ATOM  9996  C   ARG C  61      22.316  44.585  89.309  1.00 59.40           C
ATOM  9997  O   ARG C  61      21.757  45.689  89.288  1.00 60.37           O
ATOM  9998  N   PHE C  62      23.370  44.295  88.562  1.00 55.68           N
ATOM 10000  CA  PHE C  62      23.773  45.184  87.492  1.00 51.73           C
ATOM 10002  CB  PHE C  62      25.226  44.908  87.114  1.00 49.74           C
ATOM 10005  CG  PHE C  62      26.190  45.398  88.121  1.00 48.14           C
ATOM 10006  CD1 PHE C  62      26.773  44.542  89.009  1.00 49.83           C
ATOM 10008  CE1 PHE C  62      27.607  44.999  89.940  1.00 50.62           C
ATOM 10010  CZ  PHE C  62      27.859  46.353  90.035  1.00 49.05           C
ATOM 10012  CE2 PHE C  62      27.252  47.208  89.173  1.00 46.83           C
ATOM 10014  CD2 PHE C  62      26.440  46.724  88.219  1.00 46.75           C
ATOM 10016  C   PHE C  62      22.859  45.064  86.262  1.00 51.66           C
ATOM 10017  O   PHE C  62      22.550  43.980  85.814  1.00 52.39           O
ATOM 10018  N   SER C  63      22.447  46.200  85.726  1.00 50.26           N
ATOM 10020  CA  SER C  63      21.681  46.249  84.502  1.00 51.03           C
ATOM 10022  CB  SER C  63      20.242  45.917  84.784  1.00 55.13           C
ATOM 10025  OG  SER C  63      19.490  47.066  85.148  1.00 57.69           O
ATOM 10027  C   SER C  63      21.835  47.599  83.758  1.00 49.12           C
ATOM 10028  O   SER C  63      22.366  48.536  84.265  1.00 47.72           O
ATOM 10029  N   GLY C  64      21.405  47.648  82.513  1.00 49.99           N
ATOM 10031  CA  GLY C  64      21.517  48.834  81.694  1.00 48.78           C
ATOM 10034  C   GLY C  64      20.311  48.920  80.758  1.00 52.32           C
ATOM 10035  O   GLY C  64      19.752  47.899  80.330  1.00 54.84           O
ATOM 10036  N   SER C  65      19.840  50.152  80.489  1.00 53.63           N
ATOM 10038  CA  SER C  65      18.816  50.477  79.546  1.00 56.59           C
ATOM 10040  CB  SER C  65      17.528  50.804  80.288  1.00 61.01           C
ATOM 10043  OG  SER C  65      17.844  51.826  81.211  1.00 63.48           O
ATOM 10045  C   SER C  65      19.200  51.719  78.732  1.00 55.34           C
ATOM 10046  O   SER C  65      20.157  52.439  79.066  1.00 53.24           O
ATOM 10047  N   GLY C  66      18.429  51.969  77.660  1.00 57.45           N
ATOM 10049  CA  GLY C  66      18.670  53.097  76.740  1.00 56.09           C
ATOM 10052  C   GLY C  66      18.946  52.775  75.281  1.00 53.82           C
ATOM 10053  O   GLY C  66      19.495  51.716  74.976  1.00 50.48           O
ATOM 10054  N   SER C  67      18.490  53.659  74.404  1.00 55.01           N
ATOM 10056  CA  SER C  67      18.997  53.730  73.072  1.00 55.14           C
ATOM 10058  CB  SER C  67      18.520  52.591  72.105  1.00 56.95           C
ATOM 10061  OG  SER C  67      17.150  52.540  71.891  1.00 61.53           O
ATOM 10063  C   SER C  67      18.766  55.098  72.509  1.00 57.64           C
ATOM 10064  O   SER C  67      17.849  55.760  72.887  1.00 61.04           O
ATOM 10065  N   GLY C  68      19.654  55.501  71.597  1.00 57.28           N
ATOM 10067  CA  GLY C  68      19.701  56.829  71.017  1.00 59.22           C
ATOM 10070  C   GLY C  68      20.913  57.529  71.590  1.00 56.57           C
ATOM 10071  O   GLY C  68      22.008  57.423  71.141  1.00 53.93           O
ATOM 10072  N   THR C  69      20.681  58.136  72.712  1.00 58.48           N
ATOM 10074  CA  THR C  69      21.396  59.306  73.137  1.00 59.19           C
ATOM 10076  CB  THR C  69      20.645  60.517  72.548  1.00 64.50           C
ATOM 10078  OG1 THR C  69      21.537  61.132  71.613  1.00 67.14           O
ATOM 10080  CG2 THR C  69      20.230  61.612  73.564  1.00 66.00           C
ATOM 10084  C   THR C  69      21.448  59.347  74.621  1.00 57.98           C
ATOM 10085  O   THR C  69      22.437  59.751  75.159  1.00 55.59           O
ATOM 10086  N   ASP C  70      20.375  58.909  75.272  1.00 60.07           N
ATOM 10088  CA  ASP C  70      20.375  58.727  76.714  1.00 60.09           C
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ATOM	10090	CB	ASP	C	70	19.133	59.425	77.247	1.00	64.32	C
ATOM	10093	CG	ASP	C	70	19.158	60.961	76.992	1.00	70.77	C
ATOM	10094	OD1	ASP	C	70	20.277	61.595	77.042	1.00	67.90	O
ATOM	10095	OD2	ASP	C	70	18.069	61.615	76.776	1.00	79.56	O
ATOM	10096	C	ASP	C	70	20.433	57.271	77.244	1.00	57.20	C
ATOM	10097	O	ASP	C	70	19.434	56.565	77.157	1.00	61.34	O
ATOM	10098	N	PHE	C	71	21.564	56.871	77.814	1.00	52.43	N
ATOM	10100	CA	PHE	C	71	21.775	55.575	78.451	1.00	51.08	C
ATOM	10102	CB	PHE	C	71	23.020	54.922	77.855	1.00	48.63	C
ATOM	10105	CG	PHE	C	71	23.070	55.028	76.388	1.00	47.77	C
ATOM	10106	CD1	PHE	C	71	23.558	56.186	75.786	1.00	46.39	C
ATOM	10108	CE1	PHE	C	71	23.531	56.351	74.450	1.00	47.37	C
ATOM	10110	CZ	PHE	C	71	23.001	55.340	73.654	1.00	50.56	C
ATOM	10112	CE2	PHE	C	71	22.502	54.172	74.245	1.00	49.84	C
ATOM	10114	CD2	PHE	C	71	22.531	54.039	75.620	1.00	48.19	C
ATOM	10116	C	PHE	C	71	21.950	55.649	79.988	1.00	50.97	C
ATOM	10117	O	PHE	C	71	22.106	56.674	80.535	1.00	52.40	O
ATOM	10118	N	THR	C	72	21.907	54.515	80.672	1.00	50.66	N
ATOM	10120	CA	THR	C	72	21.602	54.430	82.111	1.00	51.41	C
ATOM	10122	CB	THR	C	72	20.094	54.686	82.394	1.00	55.42	C
ATOM	10124	OG1	THR	C	72	19.880	56.096	82.612	1.00	58.52	O
ATOM	10126	CG2	THR	C	72	19.663	54.044	83.737	1.00	55.85	C
ATOM	10130	C	THR	C	72	22.009	53.029	82.632	1.00	49.89	C
ATOM	10131	O	THR	C	72	21.515	51.980	82.190	1.00	50.33	O
ATOM	10132	N	LEU	C	73	22.945	53.034	83.554	1.00	48.22	N
ATOM	10134	CA	LEU	C	73	23.410	51.850	84.229	1.00	47.33	C
ATOM	10136	CB	LEU	C	73	24.898	52.013	84.360	1.00	43.98	C
ATOM	10139	CG	LEU	C	73	25.579	50.891	85.084	1.00	43.79	C
ATOM	10141	CD1	LEU	C	73	25.447	49.588	84.285	1.00	43.27	C
ATOM	10145	CD2	LEU	C	73	27.020	51.257	85.309	1.00	39.29	C
ATOM	10149	C	LEU	C	73	22.760	51.821	85.616	1.00	50.10	C
ATOM	10150	O	LEU	C	73	22.792	52.823	86.325	1.00	51.66	O
ATOM	10151	N	SER	C	74	22.167	50.743	86.071	1.00	51.27	N
ATOM	10153	CA	SER	C	74	21.730	50.879	87.435	1.00	54.82	C
ATOM	10155	CB	SER	C	74	20.291	51.311	87.436	1.00	57.75	C
ATOM	10158	OG	SER	C	74	19.645	50.362	86.713	1.00	60.90	O
ATOM	10160	C	SER	C	74	21.976	49.663	88.313	1.00	56.29	C
ATOM	10161	O	SER	C	74	22.286	48.605	87.809	1.00	56.37	O
ATOM	10162	N	ILE	C	75	21.872	49.823	89.634	1.00	58.41	N
ATOM	10164	CA	ILE	C	75	22.116	48.720	90.561	1.00	59.78	C
ATOM	10166	CB	ILE	C	75	23.356	49.038	91.371	1.00	57.98	C
ATOM	10168	CG1	ILE	C	75	24.460	49.483	90.438	1.00	54.60	C
ATOM	10171	CD1	ILE	C	75	25.843	49.606	91.120	1.00	55.60	C
ATOM	10175	CG2	ILE	C	75	23.802	47.821	92.132	1.00	59.77	C
ATOM	10179	C	ILE	C	75	20.937	48.621	91.491	1.00	64.00	C
ATOM	10180	O	ILE	C	75	20.583	49.616	92.011	1.00	65.00	O
ATOM	10181	N	ASN	C	76	20.325	47.458	91.705	1.00	67.66	N
ATOM	10183	CA	ASN	C	76	19.433	47.273	92.874	1.00	72.86	C
ATOM	10185	CB	ASN	C	76	18.573	46.066	92.666	1.00	77.07	C
ATOM	10188	CG	ASN	C	76	17.770	46.202	91.447	1.00	80.49	C
ATOM	10189	OD1	ASN	C	76	17.965	47.202	90.704	1.00	80.41	O
ATOM	10190	ND2	ASN	C	76	16.849	45.249	91.198	1.00	83.51	N
ATOM	10193	C	ASN	C	76	20.234	47.037	94.121	1.00	73.25	C
ATOM	10194	O	ASN	C	76	21.376	46.588	94.067	1.00	71.87	O
ATOM	10195	N	SER	C	77	19.686	47.302	95.282	1.00	75.89	N
ATOM	10197	CA	SER	C	77	20.510	47.059	96.480	1.00	76.19	C
ATOM	10199	CB	SER	C	77	20.179	45.692	97.115	1.00	80.08	C
ATOM	10202	OG	SER	C	77	21.236	44.803	96.770	1.00	81.82	O
ATOM	10204	C	SER	C	77	22.056	47.202	96.231	1.00	70.21	C
ATOM	10205	O	SER	C	77	22.785	46.223	95.964	1.00	66.16	O
ATOM	10206	N	VAL	C	78	22.515	48.446	96.376	1.00	68.55	N
ATOM	10208	CA	VAL	C	78	23.958	48.795	96.322	1.00	65.96	C
ATOM	10210	CB	VAL	C	78	24.263	50.293	96.464	1.00	64.03	C
ATOM	10212	CG1	VAL	C	78	25.675	50.540	96.047	1.00	59.70	C
ATOM	10216	CG2	VAL	C	78	23.367	51.101	95.666	1.00	63.10	C
ATOM	10220	C	VAL	C	78	24.733	48.220	97.475	1.00	68.31	C
ATOM	10221	O	VAL	C	78	24.269	48.259	98.604	1.00	70.79	O
ATOM	10222	N	GLU	C	79	25.939	47.756	97.184	1.00	67.29	N

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ATOM 10224  CA  GLU C  79      26.747  47.109  98.182  1.00 70.49           C
ATOM 10226  CB  GLU C  79      27.015  45.646  97.772  1.00 71.59           C
ATOM 10229  CG  GLU C  79      27.567  44.817  98.955  1.00 78.33           C
ATOM 10232  CD  GLU C  79      27.217  43.318  98.941  1.00 81.18           C
ATOM 10233  OE1 GLU C  79      27.474  42.734  97.843  1.00 73.90           O
ATOM 10234  OE2 GLU C  79      26.760  42.776 100.055  1.00 81.77           O
ATOM 10235  C   GLU C  79      28.063  47.841  98.381  1.00 69.03           C
ATOM 10236  O   GLU C  79      28.525  48.598  97.500  1.00 66.31           O
ATOM 10237  N   SER C  80      28.689  47.602  99.539  1.00 71.62           N
ATOM 10239  CA  SER C  80      30.037  48.142  99.822  1.00 70.15           C
ATOM 10241  CB  SER C  80      30.613  47.569 101.134  1.00 74.08           C
ATOM 10244  OG  SER C  80      31.587  46.535 100.904  1.00 74.59           O
ATOM 10246  C   SER C  80      30.987  47.854  98.682  1.00 66.56           C
ATOM 10247  O   SER C  80      31.837  48.668  98.330  1.00 65.25           O
ATOM 10248  N   GLU C  81      30.846  46.681  98.119  1.00 65.84           N
ATOM 10250  CA  GLU C  81      31.744  46.272  97.084  1.00 64.00           C
ATOM 10252  CB  GLU C  81      31.555  44.781  96.945  1.00 67.28           C
ATOM 10255  CG  GLU C  81      32.772  43.977  96.520  1.00 70.30           C
ATOM 10258  CD  GLU C  81      32.322  42.601  95.984  1.00 76.21           C
ATOM 10259  OE1 GLU C  81      31.393  41.987  96.673  1.00 77.86           O
ATOM 10260  OE2 GLU C  81      32.876  42.177  94.881  1.00 75.85           O
ATOM 10261  C   GLU C  81      31.451  47.010  95.746  1.00 59.35           C
ATOM 10262  O   GLU C  81      32.154  46.833  94.764  1.00 57.13           O
ATOM 10263  N   ASP C  82      30.422  47.851  95.702  1.00 57.91           N
ATOM 10265  CA  ASP C  82      30.121  48.600  94.488  1.00 54.01           C
ATOM 10267  CB  ASP C  82      28.618  48.743  94.296  1.00 54.53           C
ATOM 10270  CG  ASP C  82      27.901  47.367  94.085  1.00 57.28           C
ATOM 10271  OD1 ASP C  82      28.609  46.391  93.687  1.00 53.65           O
ATOM 10272  OD2 ASP C  82      26.682  47.201  94.289  1.00 58.60           O
ATOM 10273  C   ASP C  82      30.766  49.950  94.511  1.00 52.01           C
ATOM 10274  O   ASP C  82      30.626  50.689  93.606  1.00 49.44           O
ATOM 10275  N   ILE C  83      31.480  50.285  95.562  1.00 53.49           N
ATOM 10277  CA  ILE C  83      32.314  51.486  95.551  1.00 52.54           C
ATOM 10279  CB  ILE C  83      32.877  51.678  96.961  1.00 54.86           C
ATOM 10281  CG1 ILE C  83      31.810  52.202  97.892  1.00 56.48           C
ATOM 10284  CD1 ILE C  83      32.220  52.011  99.307  1.00 59.82           C
ATOM 10288  CG2 ILE C  83      34.042  52.604  96.978  1.00 55.41           C
ATOM 10292  C   ILE C  83      33.434  51.354  94.470  1.00 50.29           C
ATOM 10293  O   ILE C  83      34.193  50.354  94.456  1.00 49.66           O
ATOM 10294  N   ALA C  84      33.528  52.382  93.610  1.00 48.84           N
ATOM 10296  CA  ALA C  84      34.175  52.304  92.263  1.00 46.44           C
ATOM 10298  CB  ALA C  84      33.829  50.998  91.537  1.00 44.27           C
ATOM 10302  C   ALA C  84      33.761  53.452  91.360  1.00 45.36           C
ATOM 10303  O   ALA C  84      32.673  53.978  91.469  1.00 46.26           O
ATOM 10304  N   ASP C  85      34.621  53.824  90.437  1.00 44.56           N
ATOM 10306  CA  ASP C  85      34.175  54.588  89.275  1.00 43.73           C
ATOM 10308  CB  ASP C  85      35.354  55.295  88.690  1.00 43.97           C
ATOM 10311  CG  ASP C  85      35.925  56.290  89.604  1.00 47.86           C
ATOM 10312  OD1 ASP C  85      35.213  57.307  89.833  1.00 51.36           O
ATOM 10313  OD2 ASP C  85      37.066  56.130  90.098  1.00 46.79           O
ATOM 10314  C   ASP C  85      33.502  53.735  88.135  1.00 41.60           C
ATOM 10315  O   ASP C  85      33.984  52.694  87.751  1.00 40.63           O
ATOM 10316  N   TYR C  86      32.394  54.211  87.600  1.00 40.84           N
ATOM 10318  CA  TYR C  86      31.741  53.554  86.508  1.00 39.46           C
ATOM 10320  CB  TYR C  86      30.278  53.370  86.862  1.00 40.82           C
ATOM 10323  CG  TYR C  86      30.128  52.481  88.089  1.00 41.54           C
ATOM 10324  CD1 TYR C  86      30.275  52.972  89.390  1.00 40.87           C
ATOM 10326  CE1 TYR C  86      30.238  52.105  90.477  1.00 42.12           C
ATOM 10328  CZ  TYR C  86      30.045  50.721  90.274  1.00 43.49           C
ATOM 10329  OH  TYR C  86      29.967  49.762  91.277  1.00 44.20           O
ATOM 10331  CE2 TYR C  86      29.911  50.233  88.998  1.00 43.68           C
ATOM 10333  CD2 TYR C  86      29.947  51.111  87.922  1.00 43.03           C
ATOM 10335  C   TYR C  86      31.981  54.442  85.282  1.00 39.22           C
ATOM 10336  O   TYR C  86      31.996  55.699  85.428  1.00 39.82           O
ATOM 10337  N   TYR C  87      32.248  53.781  84.121  1.00 37.23           N
ATOM 10339  CA  TYR C  87      32.593  54.411  82.848  1.00 35.32           C
ATOM 10341  CB  TYR C  87      34.068  54.178  82.513  1.00 34.25           C
ATOM 10344  CG  TYR C  87      35.078  54.824  83.436  1.00 32.69           C
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ATOM	10345	CD1	TYR	C	87	35.673	54.085	84.435	1.00	34.43	C
ATOM	10347	CE1	TYR	C	87	36.624	54.622	85.308	1.00	34.35	C
ATOM	10349	CZ	TYR	C	87	36.944	55.979	85.221	1.00	35.80	C
ATOM	10350	OH	TYR	C	87	37.860	56.518	86.145	1.00	36.98	O
ATOM	10352	CE2	TYR	C	87	36.313	56.765	84.217	1.00	34.38	C
ATOM	10354	CD2	TYR	C	87	35.427	56.154	83.317	1.00	32.88	C
ATOM	10356	C	TYR	C	87	31.659	53.868	81.712	1.00	35.54	C
ATOM	10357	O	TYR	C	87	31.079	52.769	81.798	1.00	33.51	O
ATOM	10358	N	CYS	C	88	31.451	54.688	80.674	1.00	36.35	N
ATOM	10360	CA	CYS	C	88	30.675	54.252	79.500	1.00	36.73	C
ATOM	10362	CB	CYS	C	88	29.397	55.021	79.326	1.00	38.36	C
ATOM	10365	SG	CYS	C	88	29.606	56.785	79.010	1.00	45.26	S
ATOM	10366	C	CYS	C	88	31.526	54.473	78.301	1.00	36.06	C
ATOM	10367	O	CYS	C	88	32.359	55.383	78.363	1.00	37.61	O
ATOM	10368	N	GLN	C	89	31.434	53.593	77.291	1.00	34.22	N
ATOM	10370	CA	GLN	C	89	32.123	53.844	76.047	1.00	35.12	C
ATOM	10372	CB	GLN	C	89	33.376	52.960	75.808	1.00	34.83	C
ATOM	10375	CG	GLN	C	89	33.011	51.589	75.387	1.00	35.80	C
ATOM	10378	CD	GLN	C	89	34.144	50.697	75.122	1.00	32.88	C
ATOM	10379	OE1	GLN	C	89	35.021	50.995	74.338	1.00	28.59	O
ATOM	10380	NE2	GLN	C	89	34.097	49.552	75.751	1.00	34.45	N
ATOM	10383	C	GLN	C	89	31.178	53.728	74.916	1.00	35.20	C
ATOM	10384	O	GLN	C	89	30.136	53.113	75.048	1.00	36.60	O
ATOM	10385	N	GLN	C	90	31.513	54.370	73.812	1.00	35.36	N
ATOM	10387	CA	GLN	C	90	30.724	54.222	72.614	1.00	35.88	C
ATOM	10389	CB	GLN	C	90	30.190	55.561	72.034	1.00	37.15	C
ATOM	10392	CG	GLN	C	90	31.160	56.518	71.509	1.00	38.90	C
ATOM	10395	CD	GLN	C	90	31.751	56.167	70.178	1.00	39.85	C
ATOM	10396	OE1	GLN	C	90	31.045	55.686	69.291	1.00	39.79	O
ATOM	10397	NE2	GLN	C	90	33.055	56.488	70.000	1.00	36.83	N
ATOM	10400	C	GLN	C	90	31.541	53.417	71.654	1.00	34.21	C
ATOM	10401	O	GLN	C	90	32.721	53.427	71.725	1.00	35.03	O
ATOM	10402	N	ASN	C	91	30.827	52.751	70.783	1.00	35.58	N
ATOM	10404	CA	ASN	C	91	31.209	51.680	69.873	1.00	35.22	C
ATOM	10406	CB	ASN	C	91	30.309	50.451	70.175	1.00	34.54	C
ATOM	10409	CG	ASN	C	91	31.052	49.282	69.987	1.00	34.93	C
ATOM	10410	OD1	ASN	C	91	32.257	49.468	69.874	1.00	37.10	O
ATOM	10411	ND2	ASN	C	91	30.452	48.094	69.806	1.00	34.50	N
ATOM	10414	C	ASN	C	91	30.932	52.048	68.387	1.00	36.89	C
ATOM	10415	O	ASN	C	91	31.327	51.330	67.449	1.00	35.22	O
ATOM	10416	N	ASN	C	92	30.203	53.164	68.223	1.00	37.82	N
ATOM	10418	CA	ASN	C	92	29.658	53.596	66.975	1.00	39.19	C
ATOM	10420	CB	ASN	C	92	28.456	54.437	67.328	1.00	42.61	C
ATOM	10423	CG	ASN	C	92	27.489	54.658	66.206	1.00	42.89	C
ATOM	10424	OD1	ASN	C	92	27.520	54.082	65.292	1.00	44.19	O
ATOM	10425	ND2	ASN	C	92	26.568	55.490	66.411	1.00	57.14	N
ATOM	10428	C	ASN	C	92	30.602	54.401	66.135	1.00	39.91	C
ATOM	10429	O	ASN	C	92	30.717	54.126	64.972	1.00	39.51	O
ATOM	10430	N	ASN	C	93	31.291	55.405	66.676	1.00	40.89	N
ATOM	10432	CA	ASN	C	93	32.127	56.280	65.792	1.00	43.39	C
ATOM	10434	CB	ASN	C	93	31.939	57.785	66.086	1.00	45.26	C
ATOM	10437	CG	ASN	C	93	30.611	58.254	65.777	1.00	45.20	C
ATOM	10438	OD1	ASN	C	93	29.775	57.526	65.177	1.00	44.43	O
ATOM	10439	ND2	ASN	C	93	30.318	59.439	66.265	1.00	49.86	N
ATOM	10442	C	ASN	C	93	33.573	55.924	65.885	1.00	42.51	C
ATOM	10443	O	ASN	C	93	33.867	55.305	66.862	1.00	43.58	O
ATOM	10444	N	TRP	C	94	34.457	56.343	64.958	1.00	43.96	N
ATOM	10446	CA	TRP	C	94	35.670	55.658	64.819	1.00	43.09	C
ATOM	10448	CB	TRP	C	94	36.318	55.596	63.431	1.00	45.10	C
ATOM	10451	CG	TRP	C	94	37.929	55.151	63.579	1.00	41.72	C
ATOM	10452	CD1	TRP	C	94	38.440	53.861	63.794	1.00	37.65	C
ATOM	10454	NE1	TRP	C	94	39.800	53.893	63.964	1.00	38.41	N
ATOM	10456	CE2	TRP	C	94	40.213	55.197	63.962	1.00	41.29	C
ATOM	10457	CD2	TRP	C	94	39.081	56.019	63.735	1.00	42.04	C
ATOM	10458	CE3	TRP	C	94	39.264	57.397	63.732	1.00	44.37	C
ATOM	10460	CZ3	TRP	C	94	40.504	57.884	63.875	1.00	46.24	C
ATOM	10462	CH2	TRP	C	94	41.596	57.059	64.053	1.00	46.26	C
ATOM	10464	CZ2	TRP	C	94	41.473	55.715	64.076	1.00	44.06	C

ATOM	10466	C	TRP	C	94	36.842	55.984	65.627	1.00	44.73	C
ATOM	10467	O	TRP	C	94	37.890	55.418	65.277	1.00	50.14	O
ATOM	10468	N	PRO	C	95	36.955	56.786	66.611	1.00	42.69	N
ATOM	10469	CA	PRO	C	95	37.708	56.193	67.739	1.00	39.74	C
ATOM	10471	CB	PRO	C	95	38.606	57.326	68.220	1.00	40.92	C
ATOM	10474	CG	PRO	C	95	38.406	58.340	67.337	1.00	43.30	C
ATOM	10477	CD	PRO	C	95	37.050	58.218	66.504	1.00	45.08	C
ATOM	10480	C	PRO	C	95	36.737	55.730	68.741	1.00	37.51	C
ATOM	10481	O	PRO	C	95	35.826	56.513	68.897	1.00	40.73	O
ATOM	10482	N	THR	C	96	36.836	54.564	69.340	1.00	35.57	N
ATOM	10484	CA	THR	C	96	36.133	54.302	70.597	1.00	35.67	C
ATOM	10486	CB	THR	C	96	36.506	52.995	71.300	1.00	34.47	C
ATOM	10488	OG1	THR	C	96	36.874	52.031	70.376	1.00	40.36	O
ATOM	10490	CG2	THR	C	96	35.298	52.345	71.897	1.00	34.45	C
ATOM	10494	C	THR	C	96	36.545	55.342	71.633	1.00	37.15	C
ATOM	10495	O	THR	C	96	37.697	55.771	71.699	1.00	38.19	O
ATOM	10496	N	THR	C	97	35.597	55.641	72.520	1.00	37.17	N
ATOM	10498	CA	THR	C	97	35.688	56.759	73.381	1.00	37.73	C
ATOM	10500	CB	THR	C	97	34.989	57.870	72.675	1.00	39.59	C
ATOM	10502	OG1	THR	C	97	35.841	58.260	71.625	1.00	39.41	O
ATOM	10504	CG2	THR	C	97	34.957	59.110	73.454	1.00	45.48	C
ATOM	10508	C	THR	C	97	35.031	56.368	74.658	1.00	36.93	C
ATOM	10509	O	THR	C	97	34.132	55.590	74.698	1.00	36.08	O
ATOM	10510	N	PHE	C	98	35.522	56.933	75.731	1.00	38.65	N
ATOM	10512	CA	PHE	C	98	34.986	56.695	77.041	1.00	37.72	C
ATOM	10514	CB	PHE	C	98	36.159	56.124	77.902	1.00	37.47	C
ATOM	10517	CG	PHE	C	98	36.606	54.763	77.485	1.00	34.26	C
ATOM	10518	CD1	PHE	C	98	37.578	54.609	76.544	1.00	35.84	C
ATOM	10520	CE1	PHE	C	98	38.002	53.331	76.187	1.00	34.75	C
ATOM	10522	CZ	PHE	C	98	37.421	52.229	76.743	1.00	29.78	C
ATOM	10524	CE2	PHE	C	98	36.491	52.389	77.668	1.00	29.34	C
ATOM	10526	CD2	PHE	C	98	36.090	53.645	78.051	1.00	31.59	C
ATOM	10528	C	PHE	C	98	34.422	58.060	77.591	1.00	39.16	C
ATOM	10529	O	PHE	C	98	34.737	59.159	77.062	1.00	40.05	O
ATOM	10530	N	GLY	C	99	33.598	57.951	78.645	1.00	38.61	N
ATOM	10532	CA	GLY	C	99	33.116	59.091	79.423	1.00	40.58	C
ATOM	10535	C	GLY	C	99	34.047	59.347	80.600	1.00	40.69	C
ATOM	10536	O	GLY	C	99	34.881	58.511	80.838	1.00	39.99	O
ATOM	10537	N	ALA	C	100	33.936	60.467	81.318	1.00	42.29	N
ATOM	10539	CA	ALA	C	100	34.759	60.800	82.331	1.00	43.08	C
ATOM	10541	CB	ALA	C	100	34.952	62.200	82.593	1.00	45.44	C
ATOM	10545	C	ALA	C	100	34.704	60.073	83.615	1.00	43.15	C
ATOM	10546	O	ALA	C	100	35.530	60.158	84.533	1.00	46.01	O
ATOM	10547	N	GLY	C	101	33.582	59.386	83.698	1.00	42.22	N
ATOM	10549	CA	GLY	C	101	33.303	58.487	84.799	1.00	41.44	C
ATOM	10552	C	GLY	C	101	32.429	59.141	85.833	1.00	42.90	C
ATOM	10553	O	GLY	C	101	32.196	60.338	85.710	1.00	43.82	O
ATOM	10554	N	THR	C	102	31.927	58.324	86.776	1.00	42.89	N
ATOM	10556	CA	THR	C	102	31.102	58.722	87.925	1.00	44.84	C
ATOM	10558	CB	THR	C	102	29.615	58.489	87.561	1.00	45.99	C
ATOM	10560	OG1	THR	C	102	29.167	59.579	86.758	1.00	48.49	O
ATOM	10562	CG2	THR	C	102	28.616	58.548	88.759	1.00	48.28	C
ATOM	10566	C	THR	C	102	31.537	57.838	89.083	1.00	44.23	C
ATOM	10567	O	THR	C	102	31.749	56.657	88.885	1.00	43.22	O
ATOM	10568	N	LYS	C	103	31.688	58.393	90.278	1.00	45.21	N
ATOM	10570	CA	LYS	C	103	32.237	57.643	91.412	1.00	45.48	C
ATOM	10572	CB	LYS	C	103	33.267	58.475	92.288	1.00	47.73	C
ATOM	10575	CG	LYS	C	103	34.082	57.608	93.362	1.00	48.87	C
ATOM	10578	CD	LYS	C	103	35.298	58.255	93.982	1.00	53.95	C
ATOM	10581	CE	LYS	C	103	35.376	58.007	95.634	1.00	64.04	C
ATOM	10584	NZ	LYS	C	103	34.907	59.016	96.915	1.00	61.58	N
ATOM	10588	C	LYS	C	103	31.069	57.287	92.237	1.00	46.12	C
ATOM	10589	O	LYS	C	103	30.196	58.112	92.468	1.00	48.00	O
ATOM	10590	N	LEU	C	104	31.042	56.098	92.776	1.00	46.17	N
ATOM	10592	CA	LEU	C	104	29.904	55.784	93.608	1.00	49.29	C
ATOM	10594	CB	LEU	C	104	29.523	54.342	93.380	1.00	49.15	C
ATOM	10597	CG	LEU	C	104	28.282	53.863	94.082	1.00	53.47	C
ATOM	10599	CD1	LEU	C	104	27.166	54.601	93.392	1.00	56.73	C

ATOM	10603	CD2	LEU	C	104	28.068	52.313	94.003	1.00 54.16	C
ATOM	10607	C	LEU	C	104	30.351	55.941	94.993	1.00 51.44	C
ATOM	10608	O	LEU	C	104	31.362	55.356	95.326	1.00 53.07	O
ATOM	10609	N	GLU	C	105	29.662	56.720	95.796	1.00 53.36	N
ATOM	10611	CA	GLU	C	105	29.914	56.710	97.228	1.00 56.53	C
ATOM	10613	CB	GLU	C	105	30.270	58.104	97.697	1.00 58.68	C
ATOM	10616	CG	GLU	C	105	30.158	58.333	99.212	1.00 63.77	C
ATOM	10619	CD	GLU	C	105	30.265	59.803	99.573	1.00 68.90	C
ATOM	10620	OE1	GLU	C	105	29.358	60.563	99.176	1.00 72.30	O
ATOM	10621	OE2	GLU	C	105	31.249	60.206	100.245	1.00 72.61	O
ATOM	10622	C	GLU	C	105	28.705	56.246	98.031	1.00 58.76	C
ATOM	10623	O	GLU	C	105	27.599	56.744	97.824	1.00 59.09	O
ATOM	10624	N	LEU	C	106	28.930	55.327	98.977	1.00 60.31	N
ATOM	10626	CA	LEU	C	106	27.904	54.929	99.963	1.00 62.77	C
ATOM	10628	CB	LEU	C	106	28.333	53.678	100.722	1.00 64.45	C
ATOM	10631	CG	LEU	C	106	28.259	52.375	99.937	1.00 64.30	C
ATOM	10633	CD1	LEU	C	106	28.586	51.154	100.833	1.00 67.13	C
ATOM	10637	CD2	LEU	C	106	26.847	52.259	99.368	1.00 66.90	C
ATOM	10641	C	LEU	C	106	27.715	55.987	100.994	1.00 64.27	C
ATOM	10642	O	LEU	C	106	28.692	56.430	101.558	1.00 63.86	O
ATOM	10643	N	LYS	C	107	26.474	56.364	101.274	1.00 65.47	N
ATOM	10645	CA	LYS	C	107	26.248	57.151	102.447	1.00 68.21	C
ATOM	10647	CB	LYS	C	107	25.055	58.121	102.387	1.00 70.02	C
ATOM	10650	CG	LYS	C	107	24.467	58.503	101.031	1.00 69.45	C
ATOM	10653	CD	LYS	C	107	23.340	59.617	101.174	1.00 75.00	C
ATOM	10656	CE	LYS	C	107	21.839	59.052	101.327	1.00 80.27	C
ATOM	10659	NZ	LYS	C	107	21.257	58.305	100.105	1.00 78.29	N
ATOM	10663	C	LYS	C	107	26.191	56.193	103.612	1.00 70.40	C
ATOM	10664	O	LYS	C	107	26.242	54.991	103.448	1.00 69.16	O
ATOM	10665	N	ARG	C	108	26.094	56.784	104.795	1.00 55.67	N
ATOM	10667	CA	ARG	C	108	26.552	56.234	106.070	1.00 55.57	C
ATOM	10669	CB	ARG	C	108	28.060	56.047	105.949	1.00 55.68	C
ATOM	10672	CG	ARG	C	108	28.725	55.336	107.046	1.00 56.83	C
ATOM	10675	CD	ARG	C	108	29.579	56.238	107.866	1.00 57.77	C
ATOM	10678	NE	ARG	C	108	29.552	55.864	109.288	1.00 57.84	N
ATOM	10680	CZ	ARG	C	108	30.316	54.919	109.761	1.00 60.59	C
ATOM	10681	NH1	ARG	C	108	31.146	54.248	108.965	1.00 62.42	N
ATOM	10684	NH2	ARG	C	108	30.258	54.623	111.020	1.00 64.86	N
ATOM	10687	C	ARG	C	108	26.229	57.307	107.130	1.00 54.10	C
ATOM	10688	O	ARG	C	108	26.110	58.500	106.783	1.00 52.40	O
ATOM	10689	N	THR	C	109	26.067	56.911	108.401	1.00 55.56	N
ATOM	10691	CA	THR	C	109	25.907	57.934	109.458	1.00 56.08	C
ATOM	10693	CB	THR	C	109	25.537	57.387	110.847	1.00 58.53	C
ATOM	10695	OG1	THR	C	109	26.528	56.464	111.278	1.00 58.94	O
ATOM	10697	CG2	THR	C	109	24.244	56.654	110.836	1.00 60.67	C
ATOM	10701	C	THR	C	109	27.167	58.773	109.655	1.00 54.85	C
ATOM	10702	O	THR	C	109	28.294	58.337	109.480	1.00 54.01	O
ATOM	10703	N	VAL	C	110	26.945	59.997	110.058	1.00 55.32	N
ATOM	10705	CA	VAL	C	110	28.021	60.900	110.341	1.00 55.05	C
ATOM	10707	CB	VAL	C	110	27.434	62.253	110.890	1.00 56.58	C
ATOM	10709	CG1	VAL	C	110	28.528	63.180	111.294	1.00 57.91	C
ATOM	10713	CG2	VAL	C	110	26.507	62.970	109.873	1.00 55.27	C
ATOM	10717	C	VAL	C	110	28.999	60.194	111.343	1.00 56.38	C
ATOM	10718	O	VAL	C	110	28.608	59.690	112.392	1.00 57.15	O
ATOM	10719	N	ALA	C	111	30.277	60.109	110.979	1.00 56.38	N
ATOM	10721	CA	ALA	C	111	31.305	59.519	111.847	1.00 57.80	C
ATOM	10723	CB	ALA	C	111	31.851	58.283	111.228	1.00 57.81	C
ATOM	10727	C	ALA	C	111	32.433	60.527	112.064	1.00 57.43	C
ATOM	10728	O	ALA	C	111	33.114	60.930	111.134	1.00 55.47	O
ATOM	10729	N	ALA	C	112	32.619	60.918	113.317	1.00 59.73	N
ATOM	10731	CA	ALA	C	112	33.580	61.947	113.670	1.00 59.71	C
ATOM	10733	CB	ALA	C	112	33.324	62.564	115.064	1.00 61.97	C
ATOM	10737	C	ALA	C	112	34.938	61.327	113.593	1.00 59.10	C
ATOM	10738	O	ALA	C	112	35.109	60.135	113.881	1.00 60.02	O
ATOM	10739	N	PRO	C	113	35.869	62.147	113.125	1.00 57.92	N
ATOM	10740	CA	PRO	C	113	37.241	61.752	112.972	1.00 57.27	C
ATOM	10742	CB	PRO	C	113	37.830	62.929	112.166	1.00 56.41	C
ATOM	10745	CG	PRO	C	113	37.022	64.097	112.509	1.00 56.68	C

ATOM	10748	CD	PRO	C	113	35.676	63.541	112.663	1.00	57.56	C
ATOM	10751	C	PRO	C	113	37.884	61.697	114.306	1.00	59.38	C
ATOM	10752	O	PRO	C	113	37.599	62.541	115.106	1.00	61.02	O
ATOM	10753	N	SER	C	114	38.761	60.740	114.498	1.00	59.86	N
ATOM	10755	CA	SER	C	114	39.630	60.699	115.606	1.00	62.67	C
ATOM	10757	CB	SER	C	114	39.923	59.236	115.876	1.00	64.64	C
ATOM	10760	OG	SER	C	114	38.718	58.528	116.164	1.00	66.40	O
ATOM	10762	C	SER	C	114	40.876	61.455	115.164	1.00	62.27	C
ATOM	10763	O	SER	C	114	41.536	61.049	114.215	1.00	61.52	O
ATOM	10764	N	VAL	C	115	41.212	62.536	115.849	1.00	64.21	N
ATOM	10766	CA	VAL	C	115	42.412	63.338	115.568	1.00	64.84	C
ATOM	10768	CB	VAL	C	115	42.112	64.867	115.740	1.00	66.16	C
ATOM	10770	CG1	VAL	C	115	43.187	65.745	115.105	1.00	65.30	C
ATOM	10774	CG2	VAL	C	115	40.751	65.225	115.112	1.00	65.65	C
ATOM	10778	C	VAL	C	115	43.656	62.979	116.413	1.00	67.80	C
ATOM	10779	O	VAL	C	115	43.555	62.609	117.547	1.00	71.74	O
ATOM	10780	N	PHE	C	116	44.834	63.156	115.822	1.00	67.72	N
ATOM	10782	CA	PHE	C	116	46.130	62.702	116.329	1.00	69.88	C
ATOM	10784	CB	PHE	C	116	46.381	61.247	115.944	1.00	69.43	C
ATOM	10787	CG	PHE	C	116	45.304	60.316	116.387	1.00	69.98	C
ATOM	10788	CD1	PHE	C	116	44.217	60.065	115.575	1.00	66.04	C
ATOM	10790	CE1	PHE	C	116	43.240	59.211	115.989	1.00	68.00	C
ATOM	10792	CZ	PHE	C	116	43.309	58.597	117.221	1.00	71.83	C
ATOM	10794	CE2	PHE	C	116	44.367	58.840	118.040	1.00	75.85	C
ATOM	10796	CD2	PHE	C	116	45.367	59.710	117.630	1.00	74.09	C
ATOM	10798	C	PHE	C	116	47.217	63.542	115.687	1.00	69.39	C
ATOM	10799	O	PHE	C	116	47.290	63.629	114.457	1.00	67.03	O
ATOM	10800	N	ILE	C	117	48.055	64.175	116.502	1.00	72.96	N
ATOM	10802	CA	ILE	C	117	49.120	65.045	115.980	1.00	72.96	C
ATOM	10804	CB	ILE	C	117	49.008	66.482	116.565	1.00	74.87	C
ATOM	10806	CG1	ILE	C	117	50.181	67.350	116.111	1.00	76.75	C
ATOM	10809	CD1	ILE	C	117	49.855	68.819	115.887	1.00	77.88	C
ATOM	10813	CG2	ILE	C	117	48.837	66.451	118.062	1.00	79.54	C
ATOM	10817	C	ILE	C	117	50.458	64.376	116.247	1.00	75.27	C
ATOM	10818	O	ILE	C	117	50.557	63.617	117.210	1.00	79.55	O
ATOM	10819	N	PHE	C	118	51.457	64.596	115.387	1.00	74.30	N
ATOM	10821	CA	PHE	C	118	52.774	63.940	115.508	1.00	76.66	C
ATOM	10823	CB	PHE	C	118	52.929	62.877	114.426	1.00	74.55	C
ATOM	10826	CG	PHE	C	118	51.971	61.709	114.544	1.00	74.34	C
ATOM	10827	CD1	PHE	C	118	50.831	61.640	113.735	1.00	73.64	C
ATOM	10829	CE1	PHE	C	118	49.942	60.536	113.815	1.00	71.90	C
ATOM	10831	CZ	PHE	C	118	50.239	59.516	114.666	1.00	72.99	C
ATOM	10833	CE2	PHE	C	118	51.383	59.572	115.442	1.00	74.93	C
ATOM	10835	CD2	PHE	C	118	52.232	60.651	115.391	1.00	74.47	C
ATOM	10837	C	PHE	C	118	53.975	64.915	115.393	1.00	78.41	C
ATOM	10838	O	PHE	C	118	54.268	65.444	114.286	1.00	76.97	O
ATOM	10839	N	PRO	C	119	54.675	65.181	116.500	1.00	82.21	N
ATOM	10840	CA	PRO	C	119	55.920	65.957	116.393	1.00	84.25	C
ATOM	10842	CB	PRO	C	119	56.542	65.838	117.779	1.00	88.82	C
ATOM	10845	CG	PRO	C	119	55.382	65.517	118.696	1.00	89.91	C
ATOM	10848	CD	PRO	C	119	54.374	64.797	117.892	1.00	85.44	C
ATOM	10851	C	PRO	C	119	56.828	65.320	115.316	1.00	82.79	C
ATOM	10852	O	PRO	C	119	56.648	64.125	114.994	1.00	82.06	O
ATOM	10853	N	PRO	C	120	57.709	66.107	114.711	1.00	82.76	N
ATOM	10854	CA	PRO	C	120	58.752	65.563	113.838	1.00	82.28	C
ATOM	10856	CB	PRO	C	120	59.444	66.815	113.282	1.00	82.97	C
ATOM	10859	CG	PRO	C	120	59.057	67.942	114.183	1.00	85.25	C
ATOM	10862	CD	PRO	C	120	57.728	67.580	114.747	1.00	84.01	C
ATOM	10865	C	PRO	C	120	59.749	64.678	114.568	1.00	85.50	C
ATOM	10866	O	PRO	C	120	60.140	64.963	115.715	1.00	90.03	O
ATOM	10867	N	SER	C	121	60.184	63.637	113.886	1.00	84.53	N
ATOM	10869	CA	SER	C	121	61.025	62.639	114.484	1.00	88.74	C
ATOM	10871	CB	SER	C	121	60.927	61.392	113.675	1.00	87.48	C
ATOM	10874	OG	SER	C	121	61.718	61.641	112.529	1.00	88.53	O
ATOM	10876	C	SER	C	121	62.513	63.037	114.538	1.00	92.58	C
ATOM	10877	O	SER	C	121	62.974	63.943	113.830	1.00	92.02	O
ATOM	10878	N	ASP	C	122	63.254	62.310	115.374	1.00	96.87	N
ATOM	10880	CA	ASP	C	122	64.668	62.564	115.636	1.00	100.88	C

ATOM	10882	CB	ASP	C	122	65.212	61.403	116.516	1.00	106.35	C
ATOM	10885	CG	ASP	C	122	64.930	61.583	118.022	1.00	110.21	C
ATOM	10886	OD1	ASP	C	122	63.991	62.303	118.397	1.00	109.83	O
ATOM	10887	OD2	ASP	C	122	65.610	61.032	118.913	1.00	115.97	O
ATOM	10888	C	ASP	C	122	65.523	62.705	114.353	1.00	99.41	C
ATOM	10889	O	ASP	C	122	65.919	63.808	113.992	1.00	97.33	O
ATOM	10890	N	GLU	C	123	65.761	61.552	113.698	1.00	99.99	N
ATOM	10892	CA	GLU	C	123	66.475	61.402	112.414	1.00	99.67	C
ATOM	10894	CB	GLU	C	123	66.175	60.022	111.737	1.00	98.14	C
ATOM	10901	C	GLU	C	123	66.137	62.569	111.477	1.00	96.68	C
ATOM	10902	O	GLU	C	123	67.038	63.239	110.987	1.00	98.14	O
ATOM	10903	N	GLN	C	124	64.841	62.842	111.273	1.00	93.61	N
ATOM	10905	CA	GLN	C	124	64.398	63.880	110.305	1.00	90.64	C
ATOM	10907	CB	GLN	C	124	62.846	63.927	110.138	1.00	86.51	C
ATOM	10910	CG	GLN	C	124	62.362	64.800	108.958	1.00	82.22	C
ATOM	10913	CD	GLN	C	124	60.869	65.118	108.916	1.00	78.52	C
ATOM	10914	OE1	GLN	C	124	60.108	64.980	109.888	1.00	75.18	O
ATOM	10915	NE2	GLN	C	124	60.451	65.558	107.759	1.00	77.75	N
ATOM	10918	C	GLN	C	124	64.956	65.278	110.658	1.00	92.63	C
ATOM	10919	O	GLN	C	124	65.541	65.966	109.784	1.00	92.86	O
ATOM	10920	N	LEU	C	125	64.788	65.691	111.917	1.00	94.07	N
ATOM	10922	CA	LEU	C	125	65.326	66.981	112.331	1.00	96.57	C
ATOM	10924	CB	LEU	C	125	64.896	67.338	113.755	1.00	98.49	C
ATOM	10927	CG	LEU	C	125	63.933	68.526	113.913	1.00	97.09	C
ATOM	10929	CD1	LEU	C	125	62.846	68.157	114.932	1.00	96.51	C
ATOM	10933	CD2	LEU	C	125	64.671	69.836	114.312	1.00	99.62	C
ATOM	10937	C	LEU	C	125	66.857	66.986	112.192	1.00	100.24	C
ATOM	10938	O	LEU	C	125	68.054	112.104	1.00	102.53	O	
ATOM	10939	N	LYS	C	126	67.467	65.794	112.178	1.00	103.49	N
ATOM	10941	CA	LYS	C	126	68.902	65.655	111.893	1.00	105.04	C
ATOM	10943	CB	LYS	C	126	69.455	64.271	112.318	1.00	107.49	C
ATOM	10950	C	LYS	C	126	69.171	65.943	110.397	1.00	103.41	C
ATOM	10951	O	LYS	C	126	70.085	66.726	110.076	1.00	106.04	O
ATOM	10952	N	SER	C	127	68.371	65.337	109.510	1.00	99.35	N
ATOM	10954	CA	SER	C	127	68.423	65.607	108.082	1.00	97.89	C
ATOM	10956	CB	SER	C	127	67.356	64.775	107.347	1.00	95.15	C
ATOM	10959	OG	SER	C	127	66.142	65.501	107.072	1.00	92.42	O
ATOM	10961	C	SER	C	127	68.227	67.087	107.758	1.00	97.29	C
ATOM	10962	O	SER	C	127	68.571	67.510	106.671	1.00	97.87	O
ATOM	10963	N	GLY	C	128	67.655	67.860	108.685	1.00	96.84	N
ATOM	10965	CA	GLY	C	128	67.451	69.292	108.505	1.00	97.37	C
ATOM	10968	C	GLY	C	128	66.058	69.738	108.039	1.00	94.13	C
ATOM	10969	O	GLY	C	128	65.832	70.917	107.753	1.00	94.42	O
ATOM	10970	N	THR	C	129	65.093	68.828	107.976	1.00	91.09	N
ATOM	10972	CA	THR	C	129	63.711	69.278	107.773	1.00	88.29	C
ATOM	10974	CB	THR	C	129	63.245	68.917	106.341	1.00	86.24	C
ATOM	10976	OG1	THR	C	129	64.353	69.086	105.439	1.00	88.83	O
ATOM	10978	CG2	THR	C	129	62.258	69.966	105.811	1.00	85.12	C
ATOM	10982	C	THR	C	129	62.732	68.840	108.882	1.00	86.18	C
ATOM	10983	O	THR	C	129	63.036	67.960	109.684	1.00	87.16	O
ATOM	10984	N	ALA	C	130	61.593	69.530	108.955	1.00	84.15	N
ATOM	10986	CA	ALA	C	130	60.525	69.238	109.908	1.00	81.98	C
ATOM	10988	CB	ALA	C	130	60.318	70.399	110.827	1.00	84.47	C
ATOM	10992	C	ALA	C	130	59.244	68.958	109.157	1.00	78.03	C
ATOM	10993	O	ALA	C	130	58.773	69.810	108.392	1.00	76.36	O
ATOM	10994	N	SER	C	131	58.708	67.749	109.369	1.00	76.12	N
ATOM	10996	CA	SER	C	131	57.410	67.320	108.816	1.00	72.65	C
ATOM	10998	CB	SER	C	131	57.553	66.111	107.877	1.00	70.72	C
ATOM	11001	OG	SER	C	131	57.712	66.485	106.501	1.00	70.02	O
ATOM	11003	C	SER	C	131	56.496	66.992	110.011	1.00	72.77	C
ATOM	11004	O	SER	C	131	56.814	66.125	110.855	1.00	74.28	O
ATOM	11005	N	VAL	C	132	55.378	67.710	110.105	1.00	71.88	N
ATOM	11007	CA	VAL	C	132	54.471	67.565	111.239	1.00	72.03	C
ATOM	11009	CB	VAL	C	132	54.174	68.881	111.954	1.00	73.84	C
ATOM	11011	CG1	VAL	C	132	53.490	68.605	113.281	1.00	75.05	C
ATOM	11015	CG2	VAL	C	132	55.443	69.693	112.128	1.00	77.41	C
ATOM	11019	C	VAL	C	132	53.191	67.089	110.658	1.00	69.08	C
ATOM	11020	O	VAL	C	132	52.743	67.657	109.685	1.00	67.17	O

ATOM	11021	N	VAL	C	133	52.591	66.083	111.287	1.00	68.84	N
ATOM	11023	CA	VAL	C	133	51.465	65.357	110.700	1.00	66.13	C
ATOM	11025	CB	VAL	C	133	51.861	63.890	110.444	1.00	66.16	C
ATOM	11027	CG1	VAL	C	133	50.771	63.077	109.757	1.00	62.31	C
ATOM	11031	CG2	VAL	C	133	53.162	63.852	109.672	1.00	68.50	C
ATOM	11035	C	VAL	C	133	50.262	65.317	111.596	1.00	66.14	C
ATOM	11036	O	VAL	C	133	50.346	65.030	112.772	1.00	68.15	O
ATOM	11037	N	CYS	C	134	49.125	65.563	110.990	1.00	64.89	N
ATOM	11039	CA	CYS	C	134	47.844	65.261	111.575	1.00	64.95	C
ATOM	11041	CB	CYS	C	134	46.938	66.457	111.408	1.00	65.26	C
ATOM	11044	SG	CYS	C	134	46.037	66.697	112.941	1.00	72.19	S
ATOM	11045	C	CYS	C	134	47.197	64.094	110.858	1.00	62.06	C
ATOM	11046	O	CYS	C	134	47.449	63.862	109.674	1.00	61.20	O
ATOM	11047	N	LEU	C	135	46.337	63.380	111.568	1.00	61.40	N
ATOM	11049	CA	LEU	C	135	45.617	62.235	111.027	1.00	58.71	C
ATOM	11051	CB	LEU	C	135	46.183	60.986	111.655	1.00	60.46	C
ATOM	11054	CG	LEU	C	135	45.430	59.670	111.520	1.00	61.31	C
ATOM	11056	CD1	LEU	C	135	45.114	59.308	110.103	1.00	60.36	C
ATOM	11060	CD2	LEU	C	135	46.276	58.559	112.078	1.00	63.76	C
ATOM	11064	C	LEU	C	135	44.221	62.435	111.468	1.00	57.46	C
ATOM	11065	O	LEU	C	135	43.984	62.674	112.610	1.00	58.68	O
ATOM	11066	N	LEU	C	136	43.282	62.449	110.566	1.00	56.07	N
ATOM	11068	CA	LEU	C	136	41.871	62.381	110.951	1.00	56.20	C
ATOM	11070	CB	LEU	C	136	41.019	63.385	110.192	1.00	54.74	C
ATOM	11073	CG	LEU	C	136	41.477	64.822	109.904	1.00	55.75	C
ATOM	11075	CD1	LEU	C	136	40.252	65.754	109.846	1.00	56.08	C
ATOM	11079	CD2	LEU	C	136	42.517	65.363	110.864	1.00	57.95	C
ATOM	11083	C	LEU	C	136	41.455	60.970	110.567	1.00	56.76	C
ATOM	11084	O	LEU	C	136	41.558	60.579	109.377	1.00	54.98	O
ATOM	11085	N	ASN	C	137	41.000	60.175	111.543	1.00	59.04	N
ATOM	11087	CA	ASN	C	137	40.813	58.746	111.242	1.00	60.23	C
ATOM	11089	CB	ASN	C	137	41.551	57.792	112.223	1.00	63.94	C
ATOM	11092	CG	ASN	C	137	41.899	56.418	111.560	1.00	66.89	C
ATOM	11093	OD1	ASN	C	137	41.856	56.288	110.338	1.00	70.32	O
ATOM	11094	ND2	ASN	C	137	42.199	55.407	112.361	1.00	71.93	N
ATOM	11097	C	ASN	C	137	39.365	58.402	111.194	1.00	58.92	C
ATOM	11098	O	ASN	C	137	38.607	58.929	111.965	1.00	59.90	O
ATOM	11099	N	ASN	C	138	39.015	57.519	110.275	1.00	58.00	N
ATOM	11101	CA	ASN	C	138	37.670	56.976	110.095	1.00	57.80	C
ATOM	11103	CB	ASN	C	138	37.602	55.768	110.969	1.00	60.82	C
ATOM	11106	CG	ASN	C	138	38.594	54.763	110.761	1.00	63.86	C
ATOM	11107	OD1	ASN	C	138	39.038	54.501	109.625	1.00	64.97	O
ATOM	11108	ND2	ASN	C	138	39.057	54.201	111.853	1.00	67.79	N
ATOM	11111	C	ASN	C	138	36.531	57.965	110.296	1.00	56.57	C
ATOM	11112	O	ASN	C	138	35.732	57.824	111.235	1.00	57.27	O
ATOM	11113	N	PHE	C	139	36.479	58.985	109.420	1.00	54.48	N
ATOM	11115	CA	PHE	C	139	35.331	59.891	109.404	1.00	53.81	C
ATOM	11117	CB	PHE	C	139	35.790	61.326	109.616	1.00	53.42	C
ATOM	11120	CG	PHE	C	139	36.608	61.856	108.508	1.00	51.95	C
ATOM	11121	CD1	PHE	C	139	36.007	62.464	107.425	1.00	50.55	C
ATOM	11123	CE1	PHE	C	139	36.768	62.941	106.395	1.00	50.36	C
ATOM	11125	CZ	PHE	C	139	38.144	62.850	106.440	1.00	48.23	C
ATOM	11127	CE2	PHE	C	139	38.739	62.256	107.503	1.00	49.74	C
ATOM	11129	CD2	PHE	C	139	37.976	61.749	108.536	1.00	50.89	C
ATOM	11131	C	PHE	C	139	34.416	59.794	108.162	1.00	52.65	C
ATOM	11132	O	PHE	C	139	34.751	59.186	107.164	1.00	50.71	O
ATOM	11133	N	TYR	C	140	33.241	60.391	108.281	1.00	52.90	N
ATOM	11135	CA	TYR	C	140	32.274	60.479	107.190	1.00	53.13	C
ATOM	11137	CB	TYR	C	140	31.467	59.199	107.034	1.00	54.47	C
ATOM	11140	CG	TYR	C	140	30.597	59.241	105.814	1.00	55.53	C
ATOM	11141	CD1	TYR	C	140	31.066	58.769	104.599	1.00	56.84	C
ATOM	11143	CE1	TYR	C	140	30.306	58.850	103.463	1.00	56.96	C
ATOM	11145	CZ	TYR	C	140	29.054	59.386	103.533	1.00	58.04	C
ATOM	11146	OH	TYR	C	140	28.331	59.472	102.372	1.00	60.87	O
ATOM	11148	CE2	TYR	C	140	28.565	59.856	104.720	1.00	57.39	C
ATOM	11150	CD2	TYR	C	140	29.344	59.792	105.851	1.00	56.47	C
ATOM	11152	C	TYR	C	140	31.327	61.564	107.646	1.00	53.37	C
ATOM	11153	O	TYR	C	140	30.973	61.600	108.799	1.00	54.87	O

ATOM	11154	N	PRO	C	141	30.932	62.477	106.799	1.00 52.72	N
ATOM	11155	CA	PRO	C	141	31.297	62.520	105.408	1.00 52.43	C
ATOM	11157	CB	PRO	C	141	30.176	63.388	104.835	1.00 53.29	C
ATOM	11160	CG	PRO	C	141	29.996	64.367	105.828	1.00 53.92	C
ATOM	11163	CD	PRO	C	141	30.119	63.638	107.168	1.00 53.63	C
ATOM	11166	C	PRO	C	141	32.700	63.141	105.142	1.00 51.46	C
ATOM	11167	O	PRO	C	141	33.371	63.582	106.018	1.00 50.16	O
ATOM	11168	N	ARG	C	142	33.106	63.171	103.880	1.00 52.37	N
ATOM	11170	CA	ARG	C	142	34.467	63.464	103.538	1.00 52.21	C
ATOM	11172	CB	ARG	C	142	34.734	63.188	102.077	1.00 53.40	C
ATOM	11175	CG	ARG	C	142	36.078	63.698	101.630	1.00 56.32	C
ATOM	11178	CD	ARG	C	142	36.554	63.071	100.360	1.00 60.42	C
ATOM	11181	NE	ARG	C	142	37.713	63.814	99.826	1.00 62.68	N
ATOM	11183	CZ	ARG	C	142	38.378	63.446	98.735	1.00 62.72	C
ATOM	11184	NH1	ARG	C	142	37.965	62.338	98.098	1.00 67.02	N
ATOM	11187	NH2	ARG	C	142	39.433	64.150	98.286	1.00 59.04	N
ATOM	11190	C	ARG	C	142	34.803	64.879	103.799	1.00 52.89	C
ATOM	11191	O	ARG	C	142	35.994	65.178	104.043	1.00 52.87	O
ATOM	11192	N	GLU	C	143	33.813	65.776	103.712	1.00 54.26	N
ATOM	11194	CA	GLU	C	143	34.158	67.175	103.987	1.00 56.18	C
ATOM	11196	CB	GLU	C	143	33.053	68.169	103.642	1.00 58.86	C
ATOM	11199	CG	GLU	C	143	33.596	69.598	103.729	1.00 63.26	C
ATOM	11202	CD	GLU	C	143	32.567	70.696	103.455	1.00 70.77	C
ATOM	11203	OE1	GLU	C	143	31.399	70.575	103.939	1.00 72.09	O
ATOM	11204	OE2	GLU	C	143	32.940	71.714	102.782	1.00 74.74	O
ATOM	11205	C	GLU	C	143	34.663	67.386	105.427	1.00 55.52	C
ATOM	11206	O	GLU	C	143	33.912	67.386	106.409	1.00 55.37	O
ATOM	11207	N	ALA	C	144	35.975	67.507	105.516	1.00 55.94	N
ATOM	11209	CA	ALA	C	144	36.665	67.970	106.712	1.00 57.00	C
ATOM	11211	CB	ALA	C	144	37.587	66.852	107.213	1.00 55.95	C
ATOM	11215	C	ALA	C	144	37.478	69.253	106.372	1.00 58.66	C
ATOM	11216	O	ALA	C	144	37.631	69.622	105.214	1.00 59.65	O
ATOM	11217	N	LYS	C	145	38.038	69.884	107.380	1.00 59.98	N
ATOM	11219	CA	LYS	C	145	38.880	71.055	107.194	1.00 62.18	C
ATOM	11221	CB	LYS	C	145	37.975	72.309	107.181	1.00 65.67	C
ATOM	11224	CG	LYS	C	145	38.627	73.759	107.072	1.00 70.00	C
ATOM	11227	CD	LYS	C	145	37.728	74.817	107.895	1.00 74.41	C
ATOM	11230	CE	LYS	C	145	37.394	76.202	107.210	1.00 78.41	C
ATOM	11233	NZ	LYS	C	145	37.443	76.330	105.690	1.00 76.16	N
ATOM	11237	C	LYS	C	145	39.948	71.077	108.306	1.00 62.49	C
ATOM	11238	O	LYS	C	145	39.714	70.784	109.493	1.00 62.13	O
ATOM	11239	N	VAL	C	146	41.152	71.415	107.909	1.00 63.00	N
ATOM	11241	CA	VAL	C	146	42.268	71.334	108.824	1.00 63.55	C
ATOM	11243	CB	VAL	C	146	43.183	70.193	108.431	1.00 61.33	C
ATOM	11245	CG1	VAL	C	146	44.510	70.267	109.248	1.00 63.03	C
ATOM	11249	CG2	VAL	C	146	42.446	68.892	108.609	1.00 58.25	C
ATOM	11253	C	VAL	C	146	43.060	72.595	108.730	1.00 66.29	C
ATOM	11254	O	VAL	C	146	43.628	72.875	107.681	1.00 66.84	O
ATOM	11255	N	GLN	C	147	43.095	73.350	109.817	1.00 68.87	N
ATOM	11257	CA	GLN	C	147	43.905	74.536	109.882	1.00 72.37	C
ATOM	11259	CB	GLN	C	147	43.099	75.734	110.396	1.00 76.83	C
ATOM	11262	CG	GLN	C	147	42.317	76.514	109.337	1.00 77.62	C
ATOM	11265	CD	GLN	C	147	41.165	77.347	109.930	1.00 80.53	C
ATOM	11266	OE1	GLN	C	147	41.367	78.499	110.283	1.00 88.62	O
ATOM	11267	NE2	GLN	C	147	39.980	76.775	110.015	1.00 74.96	N
ATOM	11270	C	GLN	C	147	45.058	74.207	110.804	1.00 72.82	C
ATOM	11271	O	GLN	C	147	44.920	73.510	111.778	1.00 71.65	O
ATOM	11272	N	TRP	C	148	46.224	74.684	110.443	1.00 74.99	N
ATOM	11274	CA	TRP	C	148	47.392	74.550	111.287	1.00 76.89	C
ATOM	11276	CB	TRP	C	148	48.588	74.068	110.465	1.00 74.83	C
ATOM	11279	CG	TRP	C	148	48.711	72.619	110.138	1.00 70.59	C
ATOM	11280	CD1	TRP	C	148	48.353	72.042	108.978	1.00 67.59	C
ATOM	11282	NE1	TRP	C	148	48.676	70.711	108.984	1.00 63.05	N
ATOM	11284	CE2	TRP	C	148	49.305	70.418	110.155	1.00 65.79	C
ATOM	11285	CD2	TRP	C	148	49.343	71.584	110.905	1.00 69.46	C
ATOM	11286	CE3	TRP	C	148	49.938	71.526	112.141	1.00 72.82	C
ATOM	11288	CZ3	TRP	C	148	50.457	70.314	112.584	1.00 71.92	C
ATOM	11290	CH2	TRP	C	148	50.410	69.202	111.822	1.00 68.74	C

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ATOM 11292  CZ2 TRP C 148      49.838  69.223 110.603  1.00 67.06           C
ATOM 11294  C   TRP C 148      47.705  75.955 111.937  1.00 82.80           C
ATOM 11295  O   TRP C 148      47.740  77.001 111.243  1.00 84.38           O
ATOM 11296  N   LYS C 149      47.929  75.943 113.262  1.00 85.63           N
ATOM 11298  CA  LYS C 149      48.203  77.147 114.050  1.00 91.54           C
ATOM 11300  CB  LYS C 149      47.065  77.424 115.063  1.00 94.11           C
ATOM 11303  CG  LYS C 149      45.657  77.643 114.457  1.00 92.57           C
ATOM 11306  CD  LYS C 149      44.608  77.959 115.522  1.00 95.47           C
ATOM 11309  CE  LYS C 149      43.170  77.612 115.088  1.00 93.07           C
ATOM 11312  NZ  LYS C 149      42.369  76.679 116.029  1.00 90.06           N
ATOM 11316  C   LYS C 149      49.548  76.978 114.773  1.00 93.58           C
ATOM 11317  O   LYS C 149      49.876  75.896 115.279  1.00 91.51           O
ATOM 11318  N   VAL C 150      50.315  78.062 114.807  1.00 97.73           N
ATOM 11320  CA  VAL C 150      51.624  78.061 115.384  1.00100.07           C
ATOM 11322  CB  VAL C 150      52.631  78.262 114.275  1.00 99.22           C
ATOM 11324  CG1 VAL C 150      54.029  78.444 114.828  1.00104.37           C
ATOM 11328  CG2 VAL C 150      52.601  77.096 113.333  1.00 93.65           C
ATOM 11332  C   VAL C 150      51.629  79.233 116.329  1.00107.01           C
ATOM 11333  O   VAL C 150      51.874  80.369 115.916  1.00111.28           O
ATOM 11334  N   ASP C 151      51.334  78.985 117.600  1.00109.29           N
ATOM 11336  CA  ASP C 151      51.128  80.083 118.573  1.00116.46           C
ATOM 11338  CB  ASP C 151      52.361  81.004 118.708  1.00121.70           C
ATOM 11341  CG  ASP C 151      53.612  80.265 119.111  1.00118.58           C
ATOM 11342  OD1 ASP C 151      53.619  79.651 120.194  1.00118.15           O
ATOM 11343  OD2 ASP C 151      54.640  80.248 118.410  1.00116.55           O
ATOM 11344  C   ASP C 151      49.927  80.929 118.156  1.00118.10           C
ATOM 11345  O   ASP C 151      49.762  82.048 118.615  1.00124.53           O
ATOM 11346  N   ASN C 152      49.106  80.368 117.273  1.00112.89           N
ATOM 11348  CA  ASN C 152      47.884  80.991 116.737  1.00113.81           C
ATOM 11350  CB  ASN C 152      46.964  81.550 117.853  1.00119.38           C
ATOM 11353  CG  ASN C 152      46.467  80.472 118.794  1.00117.08           C
ATOM 11354  OD1 ASN C 152      45.498  79.741 118.489  1.00111.65           O
ATOM 11355  ND2 ASN C 152      47.133  80.356 119.948  1.00119.53           N
ATOM 11358  C   ASN C 152      48.039  82.015 115.598  1.00115.75           C
ATOM 11359  O   ASN C 152      47.197  82.882 115.467  1.00119.93           O
ATOM 11360  N   ALA C 153      49.086  81.916 114.773  1.00113.90           N
ATOM 11362  CA  ALA C 153      49.016  82.419 113.383  1.00112.97           C
ATOM 11364  CB  ALA C 153      50.362  83.049 112.914  1.00115.78           C
ATOM 11368  C   ALA C 153      48.582  81.215 112.489  1.00105.40           C
ATOM 11369  O   ALA C 153      49.196  80.118 112.536  1.00100.44           O
ATOM 11370  N   LEU C 154      47.490  81.404 111.738  1.00104.22           N
ATOM 11372  CA  LEU C 154      47.062  80.433 110.725  1.00 98.09           C
ATOM 11374  CB  LEU C 154      45.803  80.913 109.980  1.00 99.06           C
ATOM 11377  CG  LEU C 154      44.449  80.931 110.712  1.00100.59           C
ATOM 11379  CD1 LEU C 154      44.035  82.369 111.263  1.00107.76           C
ATOM 11383  CD2 LEU C 154      43.376  80.317 109.788  1.00 96.43           C
ATOM 11387  C   LEU C 154      48.178  80.250 109.706  1.00 96.18           C
ATOM 11388  O   LEU C 154      48.764  81.229 109.238  1.00 99.72           O
ATOM 11389  N   GLN C 155      48.466  78.997 109.357  1.00 90.49           N
ATOM 11391  CA  GLN C 155      49.477  78.703 108.346  1.00 88.65           C
ATOM 11393  CB  GLN C 155      50.264  77.418 108.660  1.00 84.72           C
ATOM 11396  CG  GLN C 155      51.045  77.407 109.970  1.00 85.90           C
ATOM 11399  CD  GLN C 155      51.946  78.589 110.099  1.00 91.43           C
ATOM 11400  OE1 GLN C 155      52.738  78.847 109.204  1.00 93.14           O
ATOM 11401  NE2 GLN C 155      51.820  79.336 111.198  1.00 95.40           N
ATOM 11404  C   GLN C 155      48.752  78.564 107.025  1.00 86.54           C
ATOM 11405  O   GLN C 155      47.599  78.120 106.959  1.00 84.02           O
ATOM 11406  N   SER C 156      49.404  78.988 105.966  1.00 87.95           N
ATOM 11408  CA  SER C 156      48.872  78.684 104.665  1.00 86.39           C
ATOM 11410  CB  SER C 156      47.818  79.707 104.245  1.00 89.74           C
ATOM 11413  OG  SER C 156      48.427  80.797 103.581  1.00 95.70           O
ATOM 11415  C   SER C 156      50.039  78.564 103.698  1.00 86.84           C
ATOM 11416  O   SER C 156      51.075  79.207 103.873  1.00 88.72           O
ATOM 11417  N   GLY C 157      49.867  77.656 102.735  1.00 84.26           N
ATOM 11419  CA  GLY C 157      50.836  77.421 101.684  1.00 85.21           C
ATOM 11422  C   GLY C 157      52.001  76.541 102.070  1.00 82.75           C
ATOM 11423  O   GLY C 157      52.857  76.304 101.247  1.00 83.43           O
ATOM 11424  N   ASN C 158      52.019  76.050 103.302  1.00 80.64           N
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ATOM	11426	CA	ASN	C	158	53.087	75.180	103.820	1.00	79.04	C
ATOM	11428	CB	ASN	C	158	53.786	75.891	104.976	1.00	81.79	C
ATOM	11431	CG	ASN	C	158	52.797	76.357	106.077	1.00	84.07	C
ATOM	11432	OD1	ASN	C	158	51.593	76.497	105.840	1.00	85.42	O
ATOM	11433	ND2	ASN	C	158	53.315	76.578	107.292	1.00	87.62	N
ATOM	11436	C	ASN	C	158	52.554	73.770	104.259	1.00	74.13	C
ATOM	11437	O	ASN	C	158	53.185	73.076	105.074	1.00	72.30	O
ATOM	11438	N	SER	C	159	51.392	73.365	103.719	1.00	71.66	N
ATOM	11440	CA	SER	C	159	50.788	72.052	104.073	1.00	67.90	C
ATOM	11442	CB	SER	C	159	49.729	72.128	105.214	1.00	66.13	C
ATOM	11445	OG	SER	C	159	48.749	73.114	105.020	1.00	64.64	O
ATOM	11447	C	SER	C	159	50.183	71.335	102.905	1.00	66.31	C
ATOM	11448	O	SER	C	159	49.609	71.959	102.030	1.00	68.14	O
ATOM	11449	N	GLN	C	160	50.291	70.012	102.916	1.00	64.19	N
ATOM	11451	CA	GLN	C	160	49.644	69.174	101.896	1.00	62.64	C
ATOM	11453	CB	GLN	C	160	50.677	68.532	100.993	1.00	63.54	C
ATOM	11456	CG	GLN	C	160	51.374	69.456	100.096	1.00	65.64	C
ATOM	11459	CD	GLN	C	160	52.390	68.731	99.259	1.00	68.21	C
ATOM	11460	OE1	GLN	C	160	52.193	68.544	98.030	1.00	70.43	O
ATOM	11461	NE2	GLN	C	160	53.480	68.295	99.904	1.00	66.25	N
ATOM	11464	C	GLN	C	160	48.905	68.054	102.548	1.00	59.52	C
ATOM	11465	O	GLN	C	160	49.353	67.499	103.546	1.00	58.40	O
ATOM	11466	N	GLU	C	161	47.794	67.673	101.945	1.00	58.74	N
ATOM	11468	CA	GLU	C	161	47.020	66.559	102.487	1.00	56.88	C
ATOM	11470	CB	GLU	C	161	45.748	67.079	103.199	1.00	57.07	C
ATOM	11473	CG	GLU	C	161	44.936	68.196	102.543	1.00	59.02	C
ATOM	11476	CD	GLU	C	161	43.833	68.709	103.487	1.00	61.54	C
ATOM	11477	OE1	GLU	C	161	44.130	69.229	104.606	1.00	63.55	O
ATOM	11478	OE2	GLU	C	161	42.667	68.567	103.133	1.00	61.99	O
ATOM	11479	C	GLU	C	161	46.653	65.492	101.497	1.00	55.11	C
ATOM	11480	O	GLU	C	161	46.532	65.801	100.352	1.00	55.99	O
ATOM	11481	N	SER	C	162	46.556	64.230	101.937	1.00	53.99	N
ATOM	11483	CA	SER	C	162	45.689	63.253	101.252	1.00	54.45	C
ATOM	11485	CB	SER	C	162	46.338	61.980	100.687	1.00	54.88	C
ATOM	11488	OG	SER	C	162	47.640	61.877	100.980	1.00	54.80	O
ATOM	11490	C	SER	C	162	44.599	62.743	102.111	1.00	53.51	C
ATOM	11491	O	SER	C	162	44.721	62.768	103.346	1.00	53.28	O
ATOM	11492	N	VAL	C	163	43.602	62.185	101.394	1.00	53.67	N
ATOM	11494	CA	VAL	C	163	42.567	61.396	101.915	1.00	52.73	C
ATOM	11496	CB	VAL	C	163	41.162	61.948	101.478	1.00	52.14	C
ATOM	11498	CG1	VAL	C	163	40.071	61.623	102.477	1.00	52.07	C
ATOM	11502	CG2	VAL	C	163	41.242	63.407	101.328	1.00	53.45	C
ATOM	11506	C	VAL	C	163	42.564	60.049	101.289	1.00	54.59	C
ATOM	11507	O	VAL	C	163	43.085	59.875	100.212	1.00	56.88	O
ATOM	11508	N	THR	C	164	41.975	59.088	101.948	1.00	55.77	N
ATOM	11510	CA	THR	C	164	41.851	57.795	101.389	1.00	58.56	C
ATOM	11512	CB	THR	C	164	41.900	56.737	102.484	1.00	59.66	C
ATOM	11514	OG1	THR	C	164	42.914	57.079	103.426	1.00	59.99	O
ATOM	11516	CG2	THR	C	164	42.467	55.366	101.889	1.00	64.68	C
ATOM	11520	C	THR	C	164	40.566	57.687	100.624	1.00	59.35	C
ATOM	11521	O	THR	C	164	39.597	58.310	100.908	1.00	58.00	O
ATOM	11522	N	GLU	C	165	40.579	56.823	99.639	1.00	62.70	N
ATOM	11524	CA	GLU	C	165	39.368	56.246	99.108	1.00	63.98	C
ATOM	11526	CB	GLU	C	165	39.764	55.246	98.035	1.00	68.42	C
ATOM	11529	CG	GLU	C	165	40.394	55.913	96.779	1.00	74.03	C
ATOM	11532	CD	GLU	C	165	39.509	57.028	96.100	1.00	78.67	C
ATOM	11533	OE1	GLU	C	165	38.238	56.972	96.180	1.00	81.40	O
ATOM	11534	OE2	GLU	C	165	40.078	57.978	95.467	1.00	80.96	O
ATOM	11535	C	GLU	C	165	38.537	55.561	100.192	1.00	62.40	C
ATOM	11536	O	GLU	C	165	39.094	55.035	101.158	1.00	62.62	O
ATOM	11537	N	GLN	C	166	37.206	55.570	100.001	1.00	61.60	N
ATOM	11539	CA	GLN	C	166	36.190	55.023	100.958	1.00	60.28	C
ATOM	11541	CB	GLN	C	166	34.789	55.255	100.390	1.00	60.22	C
ATOM	11544	CG	GLN	C	166	33.671	54.930	101.352	1.00	60.01	C
ATOM	11547	CD	GLN	C	166	32.343	55.571	101.001	1.00	57.99	C
ATOM	11548	OE1	GLN	C	166	31.947	55.629	99.846	1.00	60.56	O
ATOM	11549	NE2	GLN	C	166	31.631	55.984	102.008	1.00	56.87	N
ATOM	11552	C	GLN	C	166	36.369	53.544	101.355	1.00	61.82	C

ATOM	11553	O	GLN	C	166	36.668	52.732	100.536	1.00	63.96	O
ATOM	11554	N	ASP	C	167	36.172	53.205	102.611	1.00	61.44	N
ATOM	11556	CA	ASP	C	167	36.546	51.900	103.107	1.00	65.73	C
ATOM	11558	CB	ASP	C	167	36.746	51.988	104.586	1.00	65.19	C
ATOM	11561	CG	ASP	C	167	37.345	50.724	105.181	1.00	72.04	C
ATOM	11562	OD1	ASP	C	167	36.669	49.640	105.326	1.00	75.74	O
ATOM	11563	OD2	ASP	C	167	38.529	50.768	105.587	1.00	76.75	O
ATOM	11564	C	ASP	C	167	35.428	50.923	102.904	1.00	69.41	C
ATOM	11565	O	ASP	C	167	34.325	51.175	103.348	1.00	68.59	O
ATOM	11566	N	SER	C	168	35.692	49.784	102.272	1.00	74.58	N
ATOM	11568	CA	SER	C	168	34.612	48.829	101.949	1.00	78.10	C
ATOM	11570	CB	SER	C	168	35.157	47.618	101.188	1.00	83.31	C
ATOM	11573	OG	SER	C	168	36.431	47.235	101.689	1.00	84.86	O
ATOM	11575	C	SER	C	168	33.831	48.435	103.227	1.00	78.77	C
ATOM	11576	O	SER	C	168	32.616	48.748	103.318	1.00	78.19	O
ATOM	11577	N	LYS	C	169	34.533	47.857	104.227	1.00	80.20	N
ATOM	11579	CA	LYS	C	169	33.923	47.466	105.543	1.00	81.36	C
ATOM	11581	CB	LYS	C	169	34.976	46.844	106.508	1.00	84.06	C
ATOM	11584	CG	LYS	C	169	35.667	45.526	106.043	1.00	90.82	C
ATOM	11587	CD	LYS	C	169	37.176	45.430	106.502	1.00	92.25	C
ATOM	11590	CE	LYS	C	169	37.919	44.219	105.925	1.00	98.14	C
ATOM	11593	NZ	LYS	C	169	37.925	43.042	106.880	1.00	104.47	N
ATOM	11597	C	LYS	C	169	33.080	48.578	106.300	1.00	76.62	C
ATOM	11598	O	LYS	C	169	31.880	48.420	106.429	1.00	77.24	O
ATOM	11599	N	ASP	C	170	33.703	49.652	106.806	1.00	72.36	N
ATOM	11601	CA	ASP	C	170	32.992	50.745	107.525	1.00	68.94	C
ATOM	11603	CB	ASP	C	170	33.753	51.190	108.779	1.00	68.28	C
ATOM	11606	CG	ASP	C	170	35.172	51.717	108.499	1.00	68.33	C
ATOM	11607	OD1	ASP	C	170	35.469	51.859	107.357	1.00	68.00	O
ATOM	11608	OD2	ASP	C	170	35.903	52.067	109.425	1.00	71.49	O
ATOM	11609	C	ASP	C	170	32.608	51.977	106.662	1.00	65.16	C
ATOM	11610	O	ASP	C	170	32.043	52.960	107.137	1.00	61.37	O
ATOM	11611	N	SER	C	171	32.914	51.881	105.374	1.00	65.83	N
ATOM	11613	CA	SER	C	171	32.547	52.884	104.369	1.00	63.62	C
ATOM	11615	CB	SER	C	171	31.104	52.585	103.921	1.00	64.50	C
ATOM	11618	OG	SER	C	171	30.278	53.545	104.481	1.00	62.30	O
ATOM	11620	C	SER	C	171	32.857	54.392	104.719	1.00	59.93	C
ATOM	11621	O	SER	C	171	32.140	55.332	104.368	1.00	58.66	O
ATOM	11622	N	THR	C	172	34.017	54.602	105.330	1.00	59.37	N
ATOM	11624	CA	THR	C	172	34.528	55.938	105.707	1.00	55.85	C
ATOM	11626	CB	THR	C	172	34.674	55.962	107.198	1.00	55.89	C
ATOM	11628	OG1	THR	C	172	35.487	57.071	107.513	1.00	59.13	O
ATOM	11630	CG2	THR	C	172	35.511	54.826	107.712	1.00	57.10	C
ATOM	11634	C	THR	C	172	35.897	56.403	105.084	1.00	53.92	C
ATOM	11635	O	THR	C	172	36.617	55.676	104.436	1.00	54.08	O
ATOM	11636	N	TYR	C	173	36.228	57.655	105.324	1.00	52.30	N
ATOM	11638	CA	TYR	C	173	37.479	58.291	104.859	1.00	51.46	C
ATOM	11640	CB	TYR	C	173	37.166	59.643	104.193	1.00	49.71	C
ATOM	11643	CG	TYR	C	173	36.218	59.481	103.061	1.00	49.79	C
ATOM	11644	CD1	TYR	C	173	34.872	59.517	103.254	1.00	49.00	C
ATOM	11646	CE1	TYR	C	173	34.033	59.333	102.222	1.00	52.19	C
ATOM	11648	CZ	TYR	C	173	34.545	59.096	100.980	1.00	53.46	C
ATOM	11649	OH	TYR	C	173	33.727	58.910	99.884	1.00	58.02	O
ATOM	11651	CE2	TYR	C	173	35.868	59.059	100.794	1.00	52.66	C
ATOM	11653	CD2	TYR	C	173	36.680	59.236	101.810	1.00	51.00	C
ATOM	11655	C	TYR	C	173	38.513	58.493	105.961	1.00	51.35	C
ATOM	11656	O	TYR	C	173	38.240	58.326	107.138	1.00	51.36	O
ATOM	11657	N	SER	C	174	39.701	58.907	105.547	1.00	51.83	N
ATOM	11659	CA	SER	C	174	40.799	59.144	106.484	1.00	52.31	C
ATOM	11661	CB	SER	C	174	41.538	57.809	106.747	1.00	54.03	C
ATOM	11664	OG	SER	C	174	41.293	57.287	108.023	1.00	52.58	O
ATOM	11666	C	SER	C	174	41.742	60.193	105.881	1.00	51.52	C
ATOM	11667	O	SER	C	174	42.203	60.034	104.801	1.00	52.07	O
ATOM	11668	N	LEU	C	175	42.048	61.249	106.587	1.00	51.86	N
ATOM	11670	CA	LEU	C	175	42.874	62.315	106.019	1.00	52.36	C
ATOM	11672	CB	LEU	C	175	42.244	63.649	106.309	1.00	51.94	C
ATOM	11675	CG	LEU	C	175	42.542	64.815	105.400	1.00	51.62	C
ATOM	11677	CD1	LEU	C	175	41.344	65.221	104.572	1.00	50.59	C

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ATOM 11681  CD2 LEU C 175      42.946  65.915 106.230  1.00 52.90           C
ATOM 11685  C   LEU C 175      44.220  62.353 106.658  1.00 54.29           C
ATOM 11686  O   LEU C 175      44.426  61.809 107.718  1.00 55.77           O
ATOM 11687  N   SER C 176      45.160  63.032 106.029  1.00 55.63           N
ATOM 11689  CA  SER C 176      46.416  63.293 106.700  1.00 56.66           C
ATOM 11691  CB  SER C 176      47.413  62.207 106.400  1.00 57.54           C
ATOM 11694  OG  SER C 176      48.503  62.771 105.728  1.00 61.11           O
ATOM 11696  C   SER C 176      46.915  64.623 106.226  1.00 57.20           C
ATOM 11697  O   SER C 176      46.943  64.902 105.017  1.00 56.36           O
ATOM 11698  N   SER C 177      47.292  65.468 107.193  1.00 58.72           N
ATOM 11700  CA  SER C 177      47.898  66.776 106.878  1.00 59.21           C
ATOM 11702  CB  SER C 177      47.171  67.915 107.543  1.00 59.79           C
ATOM 11705  OG  SER C 177      47.283  69.028 106.687  1.00 61.45           O
ATOM 11707  C   SER C 177      49.295  66.763 107.325  1.00 59.52           C
ATOM 11708  O   SER C 177      49.564  66.372 108.408  1.00 59.47           O
ATOM 11709  N   THR C 178      50.183  67.147 106.438  1.00 60.76           N
ATOM 11711  CA  THR C 178      51.600  67.208 106.743  1.00 62.63           C
ATOM 11713  CB  THR C 178      52.400  66.234 105.865  1.00 62.33           C
ATOM 11715  OG1 THR C 178      52.028  64.884 106.194  1.00 62.25           O
ATOM 11717  CG2 THR C 178      53.836  66.288 106.225  1.00 63.69           C
ATOM 11721  C   THR C 178      52.063  68.655 106.630  1.00 64.52           C
ATOM 11722  O   THR C 178      52.212  69.231 105.532  1.00 65.27           O
ATOM 11723  N   LEU C 179      52.186  69.261 107.800  1.00 66.36           N
ATOM 11725  CA  LEU C 179      52.856  70.552 107.944  1.00 69.87           C
ATOM 11727  CB  LEU C 179      52.540  71.183 109.294  1.00 71.47           C
ATOM 11730  CG  LEU C 179      53.257  72.492 109.522  1.00 75.84           C
ATOM 11732  CD1 LEU C 179      52.876  73.551 108.468  1.00 78.63           C
ATOM 11736  CD2 LEU C 179      52.886  72.972 110.888  1.00 79.77           C
ATOM 11740  C   LEU C 179      54.370  70.431 107.757  1.00 71.38           C
ATOM 11741  O   LEU C 179      55.005  69.600 108.367  1.00 71.08           O
ATOM 11742  N   THR C 180      54.892  71.257 106.871  1.00 73.42           N
ATOM 11744  CA  THR C 180      56.279  71.148 106.515  1.00 75.49           C
ATOM 11746  CB  THR C 180      56.400  70.535 105.098  1.00 74.91           C
ATOM 11748  OG1 THR C 180      55.394  69.499 104.878  1.00 70.42           O
ATOM 11750  CG2 THR C 180      57.757  69.818 104.953  1.00 76.14           C
ATOM 11754  C   THR C 180      57.016  72.488 106.671  1.00 79.35           C
ATOM 11755  O   THR C 180      56.499  73.558 106.316  1.00 80.35           O
ATOM 11756  N   LEU C 181      58.218  72.376 107.238  1.00 81.53           N
ATOM 11758  CA  LEU C 181      59.046  73.493 107.698  1.00 86.10           C
ATOM 11760  CB  LEU C 181      58.666  73.845 109.107  1.00 87.52           C
ATOM 11763  CG  LEU C 181      57.270  74.495 109.258  1.00 88.57           C
ATOM 11765  CD1 LEU C 181      57.123  74.780 110.767  1.00 91.29           C
ATOM 11769  CD2 LEU C 181      57.124  75.802 108.372  1.00 92.28           C
ATOM 11773  C   LEU C 181      60.531  73.127 107.790  1.00 87.89           C
ATOM 11774  O   LEU C 181      60.834  72.002 108.185  1.00 87.01           O
ATOM 11775  N   SER C 182      61.451  74.058 107.498  1.00 90.99           N
ATOM 11777  CA  SER C 182      62.872  73.750 107.637  1.00 92.84           C
ATOM 11779  CB  SER C 182      63.746  74.837 107.014  1.00 96.46           C
ATOM 11782  OG  SER C 182      64.103  75.790 107.977  1.00 99.90           O
ATOM 11784  C   SER C 182      63.126  73.614 109.129  1.00 94.76           C
ATOM 11785  O   SER C 182      62.526  74.368 109.888  1.00 96.46           O
ATOM 11786  N   LYS C 183      63.973  72.665 109.562  1.00 95.19           N
ATOM 11788  CA  LYS C 183      64.345  72.530 111.001  1.00 97.89           C
ATOM 11790  CB  LYS C 183      65.603  71.666 111.218  1.00 99.64           C
ATOM 11797  C   LYS C 183      64.651  73.848 111.670  1.00102.52           C
ATOM 11798  O   LYS C 183      64.684  73.922 112.904  1.00105.22           O
ATOM 11799  N   ALA C 184      64.965  74.851 110.850  1.00104.32           N
ATOM 11801  CA  ALA C 184      65.255  76.202 111.322  1.00109.49           C
ATOM 11803  CB  ALA C 184      65.910  76.997 110.192  1.00111.80           C
ATOM 11807  C   ALA C 184      64.015  76.946 111.857  1.00109.86           C
ATOM 11808  O   ALA C 184      64.043  77.545 112.937  1.00113.60           O
ATOM 11809  N   ASP C 185      62.940  76.921 111.075  1.00106.51           N
ATOM 11811  CA  ASP C 185      61.677  77.545 111.468  1.00106.54           C
ATOM 11813  CB  ASP C 185      60.662  77.485 110.312  1.00103.12           C
ATOM 11816  CG  ASP C 185      61.105  78.269 109.052  1.00106.46           C
ATOM 11817  OD1 ASP C 185      61.944  79.204 109.095  1.00110.53           O
ATOM 11818  OD2 ASP C 185      60.608  78.007 107.935  1.00108.38           O
ATOM 11819  C   ASP C 185      61.087  76.833 112.689  1.00104.72           C
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ATOM	11820	O	ASP	C	185	60.448	77.451	113.547	1.00107.05	O
ATOM	11821	N	TYR	C	186	61.307	75.525	112.758	1.00100.91	N
ATOM	11823	CA	TYR	C	186	60.650	74.704	113.761	1.00 99.44	C
ATOM	11825	CB	TYR	C	186	60.821	73.215	113.428	1.00 95.52	C
ATOM	11828	CG	TYR	C	186	60.182	72.269	114.423	1.00 94.50	C
ATOM	11829	CD1	TYR	C	186	58.820	72.302	114.676	1.00 92.95	C
ATOM	11831	CE1	TYR	C	186	58.228	71.416	115.611	1.00 92.00	C
ATOM	11833	CZ	TYR	C	186	59.018	70.511	116.287	1.00 92.21	C
ATOM	11834	OH	TYR	C	186	58.475	69.656	117.188	1.00 90.68	O
ATOM	11836	CE2	TYR	C	186	60.364	70.460	116.052	1.00 95.55	C
ATOM	11838	CD2	TYR	C	186	60.948	71.339	115.126	1.00 96.74	C
ATOM	11840	C	TYR	C	186	61.198	75.043	115.143	1.00104.67	C
ATOM	11841	O	TYR	C	186	60.414	75.165	116.098	1.00106.10	O
ATOM	11842	N	GLU	C	187	62.532	75.225	115.226	1.00107.76	N
ATOM	11844	CA	GLU	C	187	63.227	75.577	116.466	1.00112.95	C
ATOM	11846	CB	GLU	C	187	64.703	75.893	116.196	1.00115.75	C
ATOM	11853	C	GLU	C	187	62.516	76.763	117.096	1.00116.87	C
ATOM	11854	O	GLU	C	187	62.133	76.705	118.270	1.00115.20	O
ATOM	11855	N	LYS	C	188	62.254	77.785	116.272	1.00117.68	N
ATOM	11857	CA	LYS	C	188	61.806	79.119	116.728	1.00123.34	C
ATOM	11859	CB	LYS	C	188	62.258	80.186	115.693	1.00125.15	C
ATOM	11866	C	LYS	C	188	60.293	79.334	117.137	1.00122.83	C
ATOM	11867	O	LYS	C	188	59.870	80.480	117.337	1.00127.37	O
ATOM	11868	N	HIS	C	189	59.498	78.271	117.295	1.00118.14	N
ATOM	11870	CA	HIS	C	189	58.118	78.401	117.838	1.00118.23	C
ATOM	11872	CB	HIS	C	189	57.038	78.402	116.701	1.00113.37	C
ATOM	11875	CG	HIS	C	189	57.197	79.528	115.718	1.00115.83	C
ATOM	11876	ND1	HIS	C	189	56.933	80.841	116.040	1.00122.53	N
ATOM	11878	CE1	HIS	C	189	57.218	81.617	115.011	1.00123.27	C
ATOM	11880	NE2	HIS	C	189	57.650	80.854	114.025	1.00118.61	N
ATOM	11882	CD2	HIS	C	189	57.647	79.542	114.440	1.00114.31	C
ATOM	11884	C	HIS	C	189	57.835	77.295	118.865	1.00116.94	C
ATOM	11885	O	HIS	C	189	58.396	76.204	118.757	1.00114.30	O
ATOM	11886	N	LYS	C	190	56.965	77.557	119.843	1.00119.39	N
ATOM	11888	CA	LYS	C	190	56.663	76.554	120.870	1.00119.33	C
ATOM	11890	CB	LYS	C	190	56.311	77.194	122.220	1.00126.70	C
ATOM	11897	C	LYS	C	190	55.537	75.659	120.451	1.00113.38	C
ATOM	11898	O	LYS	C	190	55.777	74.497	120.119	1.00109.64	O
ATOM	11899	N	VAL	C	191	54.318	76.222	120.457	1.00113.48	N
ATOM	11901	CA	VAL	C	191	53.055	75.504	120.222	1.00108.33	C
ATOM	11903	CB	VAL	C	191	51.789	76.364	120.601	1.00110.82	C
ATOM	11905	CG1	VAL	C	191	50.492	75.634	120.279	1.00106.29	C
ATOM	11909	CG2	VAL	C	191	51.761	76.701	122.048	1.00117.81	C
ATOM	11913	C	VAL	C	191	52.932	75.172	118.762	1.00102.06	C
ATOM	11914	O	VAL	C	191	53.386	75.958	117.927	1.00101.58	O
ATOM	11915	N	TYR	C	192	52.284	74.024	118.493	1.00 97.43	N
ATOM	11917	CA	TYR	C	192	51.969	73.511	117.156	1.00 91.95	C
ATOM	11919	CB	TYR	C	192	53.046	72.561	116.731	1.00 89.41	C
ATOM	11922	CG	TYR	C	192	54.216	73.257	116.212	1.00 90.56	C
ATOM	11923	CD1	TYR	C	192	55.338	73.417	116.990	1.00 97.01	C
ATOM	11925	CE1	TYR	C	192	56.440	74.109	116.506	1.00 99.63	C
ATOM	11927	CZ	TYR	C	192	56.404	74.640	115.220	1.00 96.17	C
ATOM	11928	OH	TYR	C	192	57.487	75.340	114.715	1.00 99.78	O
ATOM	11930	CE2	TYR	C	192	55.283	74.479	114.450	1.00 90.48	C
ATOM	11932	CD2	TYR	C	192	54.194	73.817	114.961	1.00 87.27	C
ATOM	11934	C	TYR	C	192	50.653	72.713	117.135	1.00 89.66	C
ATOM	11935	O	TYR	C	192	50.545	71.644	117.772	1.00 89.20	O
ATOM	11936	N	ALA	C	193	49.684	73.192	116.352	1.00 80.28	N
ATOM	11938	CA	ALA	C	193	48.281	72.900	116.635	1.00 87.68	C
ATOM	11940	CB	ALA	C	193	47.569	74.139	117.180	1.00 91.96	C
ATOM	11944	C	ALA	C	193	47.588	72.431	115.403	1.00 83.46	C
ATOM	11945	O	ALA	C	193	47.920	72.887	114.312	1.00 83.57	O
ATOM	11946	N	CYS	C	194	46.602	71.551	115.588	1.00 81.07	N
ATOM	11948	CA	CYS	C	194	45.912	70.929	114.502	1.00 76.76	C
ATOM	11950	CB	CYS	C	194	46.244	69.455	114.509	1.00 74.32	C
ATOM	11953	SG	CYS	C	194	45.544	68.692	113.051	1.00 76.90	S
ATOM	11954	C	CYS	C	194	44.444	71.168	114.783	1.00 76.26	C
ATOM	11955	O	CYS	C	194	43.916	70.603	115.720	1.00 77.18	O

ATOM	11956	N	GLU	C	195	43.790	72.021	113.991	1.00	75.58	N
ATOM	11958	CA	GLU	C	195	42.376	72.394	114.203	1.00	75.90	C
ATOM	11960	CB	GLU	C	195	42.230	73.907	114.332	1.00	80.39	C
ATOM	11963	CG	GLU	C	195	40.824	74.381	114.736	1.00	83.63	C
ATOM	11966	CD	GLU	C	195	40.380	75.689	114.059	1.00	87.24	C
ATOM	11967	OE1	GLU	C	195	41.166	76.308	113.301	1.00	87.78	O
ATOM	11968	OE2	GLU	C	195	39.230	76.118	114.284	1.00	89.97	O
ATOM	11969	C	GLU	C	195	41.369	71.845	113.145	1.00	71.74	C
ATOM	11970	O	GLU	C	195	41.127	72.413	112.070	1.00	70.64	O
ATOM	11971	N	VAL	C	196	40.744	70.741	113.531	1.00	69.55	N
ATOM	11973	CA	VAL	C	196	39.805	70.023	112.708	1.00	65.72	C
ATOM	11975	CB	VAL	C	196	39.792	68.572	113.122	1.00	63.49	C
ATOM	11977	CG1	VAL	C	196	38.864	67.812	112.277	1.00	60.95	C
ATOM	11981	CG2	VAL	C	196	41.195	67.993	113.025	1.00	62.64	C
ATOM	11985	C	VAL	C	196	38.388	70.591	112.830	1.00	66.93	C
ATOM	11986	O	VAL	C	196	37.907	70.990	113.890	1.00	68.84	O
ATOM	11987	N	THR	C	197	37.727	70.587	111.693	1.00	65.22	N
ATOM	11989	CA	THR	C	197	36.375	71.068	111.555	1.00	66.67	C
ATOM	11991	CB	THR	C	197	36.395	72.420	110.849	1.00	68.91	C
ATOM	11993	OG1	THR	C	197	37.268	73.302	111.567	1.00	73.48	O
ATOM	11995	CG2	THR	C	197	35.026	73.088	110.862	1.00	70.65	C
ATOM	11999	C	THR	C	197	35.623	70.042	110.718	1.00	64.04	C
ATOM	12000	O	THR	C	197	36.033	69.666	109.600	1.00	62.98	O
ATOM	12001	N	HIS	C	198	34.511	69.574	111.243	1.00	64.16	N
ATOM	12003	CA	HIS	C	198	33.842	68.464	110.617	1.00	61.33	C
ATOM	12005	CB	HIS	C	198	34.562	67.151	110.973	1.00	59.74	C
ATOM	12008	CG	HIS	C	198	33.971	65.964	110.287	1.00	58.02	C
ATOM	12009	ND1	HIS	C	198	34.128	65.750	108.936	1.00	57.39	N
ATOM	12011	CE1	HIS	C	198	33.441	64.677	108.594	1.00	56.71	C
ATOM	12013	NE2	HIS	C	198	32.826	64.208	109.663	1.00	54.74	N
ATOM	12015	CD2	HIS	C	198	33.140	64.993	110.736	1.00	55.73	C
ATOM	12017	C	HIS	C	198	32.439	68.464	111.115	1.00	62.12	C
ATOM	12018	O	HIS	C	198	32.191	68.978	112.181	1.00	65.48	O
ATOM	12019	N	GLN	C	199	31.529	67.905	110.337	1.00	60.45	N
ATOM	12021	CA	GLN	C	199	30.113	67.879	110.673	1.00	61.89	C
ATOM	12023	CB	GLN	C	199	29.321	67.205	109.531	1.00	60.84	C
ATOM	12026	CG	GLN	C	199	27.791	67.469	109.465	1.00	62.62	C
ATOM	12029	CD	GLN	C	199	27.118	66.758	108.272	1.00	62.17	C
ATOM	12030	OE1	GLN	C	199	27.803	66.780	107.132	1.00	62.44	O
ATOM	12031	NE2	GLN	C	199	26.021	66.130	108.541	1.00	62.82	N
ATOM	12034	C	GLN	C	199	29.881	67.134	111.977	1.00	62.72	C
ATOM	12035	O	GLN	C	199	28.947	67.431	112.702	1.00	64.57	O
ATOM	12036	N	GLY	C	200	30.759	66.186	112.294	1.00	61.62	N
ATOM	12038	CA	GLY	C	200	30.553	65.315	113.435	1.00	62.79	C
ATOM	12041	C	GLY	C	200	31.172	65.785	114.730	1.00	65.81	C
ATOM	12042	O	GLY	C	200	31.463	64.929	115.553	1.00	68.31	O
ATOM	12043	N	LEU	C	201	31.378	67.103	114.910	1.00	67.08	N
ATOM	12045	CA	LEU	C	201	32.111	67.693	116.042	1.00	69.26	C
ATOM	12047	CB	LEU	C	201	33.565	67.903	115.686	1.00	67.39	C
ATOM	12050	CG	LEU	C	201	34.388	66.703	115.257	1.00	64.11	C
ATOM	12052	CD1	LEU	C	201	35.552	67.128	114.421	1.00	62.77	C
ATOM	12056	CD2	LEU	C	201	34.886	65.911	116.436	1.00	66.42	C
ATOM	12060	C	LEU	C	201	31.490	69.063	116.339	1.00	73.17	C
ATOM	12061	O	LEU	C	201	31.436	69.928	115.455	1.00	72.65	O
ATOM	12062	N	SER	C	202	31.017	69.270	117.568	1.00	77.26	N
ATOM	12064	CA	SER	C	202	30.015	70.328	117.787	1.00	81.12	C
ATOM	12066	CB	SER	C	202	29.362	70.258	119.187	1.00	85.90	C
ATOM	12069	OG	SER	C	202	29.672	69.042	119.838	1.00	85.41	O
ATOM	12071	C	SER	C	202	30.667	71.668	117.561	1.00	82.89	C
ATOM	12072	O	SER	C	202	30.102	72.570	116.969	1.00	83.10	O
ATOM	12073	N	SER	C	203	31.868	71.774	118.085	1.00	84.21	N
ATOM	12075	CA	SER	C	203	32.746	72.851	117.732	1.00	86.10	C
ATOM	12077	CB	SER	C	203	32.963	73.783	118.912	1.00	92.36	C
ATOM	12080	OG	SER	C	203	33.402	73.025	120.003	1.00	93.55	O
ATOM	12082	C	SER	C	203	34.044	72.186	117.323	1.00	83.05	C
ATOM	12083	O	SER	C	203	34.262	70.983	117.626	1.00	81.22	O
ATOM	12084	N	PRO	C	204	34.873	72.948	116.593	1.00	82.81	N
ATOM	12085	CA	PRO	C	204	36.239	72.533	116.233	1.00	79.98	C

ATOM	12087	CB	PRO	C	204	36.927	73.854	115.863	1.00	82.52	C
ATOM	12090	CG	PRO	C	204	35.815	74.803	115.476	1.00	85.07	C
ATOM	12093	CD	PRO	C	204	34.522	74.253	115.995	1.00	85.30	C
ATOM	12096	C	PRO	C	204	37.021	71.856	117.358	1.00	80.67	C
ATOM	12097	O	PRO	C	204	36.880	72.153	118.548	1.00	85.19	O
ATOM	12098	N	VAL	C	205	37.859	70.933	116.950	1.00	76.65	N
ATOM	12100	CA	VAL	C	205	38.675	70.224	117.872	1.00	77.69	C
ATOM	12102	CB	VAL	C	205	38.367	68.781	117.787	1.00	74.45	C
ATOM	12104	CG1	VAL	C	205	39.541	67.929	118.243	1.00	74.59	C
ATOM	12108	CG2	VAL	C	205	37.123	68.551	118.602	1.00	76.84	C
ATOM	12112	C	VAL	C	205	40.101	70.505	117.535	1.00	77.92	C
ATOM	12113	O	VAL	C	205	40.492	70.477	116.391	1.00	75.11	O
ATOM	12114	N	THR	C	206	40.873	70.789	118.566	1.00	82.28	N
ATOM	12116	CA	THR	C	206	42.253	71.122	118.415	1.00	82.99	C
ATOM	12118	CB	THR	C	206	42.454	72.498	118.958	1.00	88.12	C
ATOM	12120	OG1	THR	C	206	41.528	73.357	118.281	1.00	89.49	O
ATOM	12122	CG2	THR	C	206	43.880	73.065	118.602	1.00	88.94	C
ATOM	12126	C	THR	C	206	43.102	70.134	119.141	1.00	83.61	C
ATOM	12127	O	THR	C	206	42.741	69.648	120.193	1.00	86.65	O
ATOM	12128	N	LYS	C	207	44.257	69.863	118.563	1.00	82.04	N
ATOM	12130	CA	LYS	C	207	45.180	68.869	119.060	1.00	82.54	C
ATOM	12132	CB	LYS	C	207	45.015	67.583	118.263	1.00	78.30	C
ATOM	12135	CG	LYS	C	207	43.851	66.746	118.747	1.00	79.34	C
ATOM	12138	CD	LYS	C	207	44.253	65.776	119.859	1.00	83.48	C
ATOM	12141	CE	LYS	C	207	43.082	65.543	120.827	1.00	87.11	C
ATOM	12144	NZ	LYS	C	207	43.103	64.157	121.312	1.00	89.42	N
ATOM	12148	C	LYS	C	207	46.566	69.432	118.866	1.00	83.38	C
ATOM	12149	O	LYS	C	207	46.950	69.716	117.727	1.00	79.79	O
ATOM	12150	N	SER	C	208	47.307	69.585	119.974	1.00	88.00	N
ATOM	12152	CA	SER	C	208	48.616	70.245	119.940	1.00	89.86	C
ATOM	12154	CB	SER	C	208	48.480	71.696	120.405	1.00	94.01	C
ATOM	12157	OG	SER	C	208	48.739	71.839	121.786	1.00	101.12	O
ATOM	12159	C	SER	C	208	49.701	69.477	120.706	1.00	92.09	C
ATOM	12160	O	SER	C	208	49.485	68.338	121.104	1.00	91.27	O
ATOM	12161	N	PHE	C	209	50.881	70.092	120.841	1.00	94.82	N
ATOM	12163	CA	PHE	C	209	52.047	69.472	121.487	1.00	97.65	C
ATOM	12165	CB	PHE	C	209	52.583	68.375	120.587	1.00	93.33	C
ATOM	12168	CG	PHE	C	209	53.213	68.915	119.352	1.00	90.96	C
ATOM	12169	CD1	PHE	C	209	54.542	69.293	119.354	1.00	92.49	C
ATOM	12171	CE1	PHE	C	209	55.156	69.817	118.232	1.00	90.22	C
ATOM	12173	CZ	PHE	C	209	54.445	69.986	117.093	1.00	86.31	C
ATOM	12175	CE2	PHE	C	209	53.081	69.625	117.063	1.00	85.26	C
ATOM	12177	CD2	PHE	C	209	52.471	69.103	118.197	1.00	87.32	C
ATOM	12179	C	PHE	C	209	53.203	70.469	121.743	1.00	101.51	C
ATOM	12180	O	PHE	C	209	53.169	71.618	121.266	1.00	101.04	O
ATOM	12181	N	ASN	C	210	54.241	69.987	122.454	1.00	105.05	N
ATOM	12183	CA	ASN	C	210	55.489	70.740	122.698	1.00	109.04	C
ATOM	12185	CB	ASN	C	210	56.296	70.878	121.379	1.00	104.70	C
ATOM	12188	CG	ASN	C	210	57.652	71.550	121.525	1.00	107.23	C
ATOM	12189	OD1	ASN	C	210	58.002	72.407	120.710	1.00	103.98	O
ATOM	12190	ND2	ASN	C	210	58.447	71.118	122.493	1.00	110.21	N
ATOM	12193	C	ASN	C	210	55.024	72.070	123.298	1.00	113.97	C
ATOM	12194	O	ASN	C	210	55.282	73.132	122.742	1.00	115.08	O
ATOM	12195	N	ARG	C	211	54.328	71.954	124.444	1.00	118.00	N
ATOM	12197	CA	ARG	C	211	53.444	72.976	125.069	1.00	121.86	C
ATOM	12199	CB	ARG	C	211	54.110	74.377	125.154	1.00	126.69	C
ATOM	12208	C	ARG	C	211	52.005	73.001	124.427	1.00	117.02	C
ATOM	12209	O	ARG	C	211	51.034	73.584	124.925	1.00	119.42	O
ATOM	12210	OXT	ARG	C	211	51.618	72.421	123.385	1.00	109.85	O
ATOM	12211	N	ALA	D	1	41.982	30.461	82.277	1.00	57.00	N
ATOM	12213	CA	ALA	D	1	41.459	31.172	81.013	1.00	55.46	C
ATOM	12215	CB	ALA	D	1	39.904	31.400	81.090	1.00	56.48	C
ATOM	12219	C	ALA	D	1	42.126	32.481	80.527	1.00	50.69	C
ATOM	12220	O	ALA	D	1	43.285	32.669	80.747	1.00	52.53	O
ATOM	12223	N	VAL	D	2	41.421	33.378	79.851	1.00	47.38	N
ATOM	12225	CA	VAL	D	2	42.079	34.564	79.219	1.00	44.48	C
ATOM	12227	CB	VAL	D	2	41.096	35.532	78.483	1.00	41.76	C
ATOM	12229	CG1	VAL	D	2	41.905	36.738	77.915	1.00	40.38	C

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ATOM 12233  CG2 VAL D   2      40.388  34.848  77.355  1.00 39.69           C
ATOM 12237  C   VAL D   2      42.842  35.498  80.122  1.00 44.26           C
ATOM 12238  O   VAL D   2      42.298  36.058  81.022  1.00 44.63           O
ATOM 12239  N   GLN D   3      44.102  35.758  79.839  1.00 45.24           N
ATOM 12241  CA  GLN D   3      44.919  36.578  80.772  1.00 45.86           C
ATOM 12243  CB  GLN D   3      45.720  35.704  81.745  1.00 48.64           C
ATOM 12246  CG  GLN D   3      44.864  34.972  82.827  1.00 51.62           C
ATOM 12249  CD  GLN D   3      45.710  34.463  84.014  1.00 59.14           C
ATOM 12250  OE1 GLN D   3      46.947  34.642  84.062  1.00 62.63           O
ATOM 12251  NE2 GLN D   3      45.053  33.840  84.973  1.00 62.87           N
ATOM 12254  C   GLN D   3      45.815  37.442  79.938  1.00 43.72           C
ATOM 12255  O   GLN D   3      46.250  36.962  78.925  1.00 44.39           O
ATOM 12256  N   LEU D   4      46.002  38.713  80.310  1.00 42.40           N
ATOM 12258  CA  LEU D   4      46.977  39.641  79.686  1.00 40.47           C
ATOM 12260  CB  LEU D   4      46.256  40.846  79.083  1.00 37.49           C
ATOM 12263  CG  LEU D   4      45.152  40.660  78.040  1.00 36.95           C
ATOM 12265  CD1 LEU D   4      45.432  41.577  76.858  1.00 36.62           C
ATOM 12269  CD2 LEU D   4      45.043  39.356  77.504  1.00 39.31           C
ATOM 12273  C   LEU D   4      47.969  40.192  80.723  1.00 41.49           C
ATOM 12274  O   LEU D   4      47.599  40.842  81.665  1.00 41.51           O
ATOM 12275  N   LYS D   5      49.250  39.970  80.549  1.00 43.23           N
ATOM 12277  CA  LYS D   5      50.217  40.446  81.543  1.00 45.14           C
ATOM 12279  CB  LYS D   5      50.892  39.284  82.282  1.00 48.88           C
ATOM 12282  CG  LYS D   5      49.903  38.536  83.266  1.00 54.47           C
ATOM 12285  CD  LYS D   5      50.560  37.297  83.990  1.00 60.79           C
ATOM 12288  CE  LYS D   5      49.635  36.013  83.904  1.00 63.31           C
ATOM 12291  NZ  LYS D   5      50.408  34.721  84.358  1.00 69.55           N
ATOM 12295  C   LYS D   5      51.231  41.305  80.900  1.00 43.29           C
ATOM 12296  O   LYS D   5      51.789  40.931  79.897  1.00 43.73           O
ATOM 12297  N   GLN D   6      51.474  42.461  81.495  1.00 42.41           N
ATOM 12299  CA  GLN D   6      52.383  43.434  80.924  1.00 41.52           C
ATOM 12301  CB  GLN D   6      51.796  44.835  81.003  1.00 40.15           C
ATOM 12304  CG  GLN D   6      50.406  44.997  80.357  1.00 39.53           C
ATOM 12307  CD  GLN D   6      49.771  46.341  80.616  1.00 38.13           C
ATOM 12308  OE1 GLN D   6      50.442  47.334  80.783  1.00 39.92           O
ATOM 12309  NE2 GLN D   6      48.468  46.370  80.597  1.00 40.10           N
ATOM 12312  C   GLN D   6      53.668  43.410  81.676  1.00 43.59           C
ATOM 12313  O   GLN D   6      53.675  43.182  82.887  1.00 43.49           O
ATOM 12314  N   SER D   7      54.778  43.568  80.920  1.00 44.87           N
ATOM 12316  CA  SER D   7      56.016  44.080  81.435  1.00 48.01           C
ATOM 12318  CB  SER D   7      57.107  42.989  81.406  1.00 51.52           C
ATOM 12321  OG  SER D   7      57.386  42.519  80.095  1.00 51.53           O
ATOM 12323  C   SER D   7      56.521  45.303  80.675  1.00 47.70           C
ATOM 12324  O   SER D   7      56.324  45.395  79.469  1.00 46.37           O
ATOM 12325  N   GLY D   8      57.216  46.210  81.364  1.00 50.18           N
ATOM 12327  CA  GLY D   8      57.911  47.315  80.713  1.00 50.86           C
ATOM 12330  C   GLY D   8      58.393  48.422  81.619  1.00 52.58           C
ATOM 12331  O   GLY D   8      57.780  48.763  82.605  1.00 51.07           O
ATOM 12332  N   PRO D   9      59.516  49.021  81.266  1.00 56.53           N
ATOM 12333  CA  PRO D   9      60.030  50.159  82.043  1.00 58.30           C
ATOM 12335  CB  PRO D   9      61.288  50.586  81.284  1.00 61.09           C
ATOM 12338  CG  PRO D   9      61.824  49.267  80.591  1.00 62.53           C
ATOM 12341  CD  PRO D   9      60.435  48.657  80.162  1.00 58.96           C
ATOM 12344  C   PRO D   9      59.005  51.228  82.035  1.00 56.45           C
ATOM 12345  O   PRO D   9      58.635  51.619  80.919  1.00 55.51           O
ATOM 12346  N   GLY D  10      58.485  51.541  83.237  1.00 56.24           N
ATOM 12348  CA  GLY D  10      57.666  52.714  83.525  1.00 54.81           C
ATOM 12351  C   GLY D  10      58.271  54.154  83.662  1.00 55.43           C
ATOM 12352  O   GLY D  10      57.660  55.095  83.144  1.00 53.90           O
ATOM 12353  N   LEU D  11      59.401  54.365  84.340  1.00 56.80           N
ATOM 12355  CA  LEU D  11      60.044  55.699  84.289  1.00 57.96           C
ATOM 12357  CB  LEU D  11      61.148  55.834  85.329  1.00 61.18           C
ATOM 12360  CG  LEU D  11      61.792  57.218  85.406  1.00 62.40           C
ATOM 12362  CD1 LEU D  11      60.836  58.390  85.187  1.00 61.71           C
ATOM 12366  CD2 LEU D  11      62.429  57.397  86.726  1.00 63.46           C
ATOM 12370  C   LEU D  11      60.627  55.983  82.904  1.00 57.05           C
ATOM 12371  O   LEU D  11      61.347  55.208  82.383  1.00 58.70           O
ATOM 12372  N   VAL D  12      60.292  57.085  82.291  1.00 55.69           N
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ATOM	12374	CA	VAL	D	12	60.629	57.284	80.914	1.00	55.00	C
ATOM	12376	CB	VAL	D	12	59.409	57.062	80.020	1.00	52.03	C
ATOM	12378	CG1	VAL	D	12	59.667	57.583	78.591	1.00	54.04	C
ATOM	12382	CG2	VAL	D	12	59.123	55.658	79.921	1.00	50.83	C
ATOM	12386	C	VAL	D	12	61.019	58.701	80.732	1.00	56.49	C
ATOM	12387	O	VAL	D	12	60.264	59.589	81.020	1.00	55.45	O
ATOM	12388	N	GLN	D	13	62.182	58.916	80.163	1.00	59.59	N
ATOM	12390	CA	GLN	D	13	62.707	60.278	80.045	1.00	62.52	C
ATOM	12392	CB	GLN	D	13	64.212	60.305	79.899	1.00	65.71	C
ATOM	12395	CG	GLN	D	13	64.776	60.399	81.258	1.00	69.08	C
ATOM	12398	CD	GLN	D	13	66.219	60.422	81.271	1.00	77.09	C
ATOM	12399	OE1	GLN	D	13	66.874	60.460	80.225	1.00	81.75	O
ATOM	12400	NE2	GLN	D	13	66.770	60.414	82.464	1.00	82.68	N
ATOM	12403	C	GLN	D	13	62.064	60.980	78.931	1.00	61.31	C
ATOM	12404	O	GLN	D	13	61.775	60.374	77.918	1.00	60.31	O
ATOM	12405	N	PRO	D	14	61.769	62.245	79.137	1.00	62.39	N
ATOM	12406	CA	PRO	D	14	61.018	62.986	78.155	1.00	61.94	C
ATOM	12408	CB	PRO	D	14	60.741	64.296	78.849	1.00	63.94	C
ATOM	12411	CG	PRO	D	14	61.829	64.410	79.730	1.00	66.71	C
ATOM	12414	CD	PRO	D	14	62.070	63.082	80.291	1.00	64.87	C
ATOM	12417	C	PRO	D	14	61.835	63.107	76.888	1.00	63.56	C
ATOM	12418	O	PRO	D	14	63.036	63.175	76.841	1.00	63.90	O
ATOM	12419	N	SER	D	15	61.050	62.965	75.841	1.00	62.98	N
ATOM	12421	CA	SER	D	15	61.451	62.904	74.452	1.00	64.41	C
ATOM	12423	CB	SER	D	15	62.324	64.072	74.064	1.00	67.55	C
ATOM	12426	OG	SER	D	15	63.444	63.478	73.590	1.00	66.46	O
ATOM	12428	C	SER	D	15	62.057	61.533	74.072	1.00	64.44	C
ATOM	12429	O	SER	D	15	62.277	61.275	72.902	1.00	65.45	O
ATOM	12430	N	GLN	D	16	62.212	60.620	75.032	1.00	64.20	N
ATOM	12432	CA	GLN	D	16	62.561	59.213	74.717	1.00	63.39	C
ATOM	12434	CB	GLN	D	16	63.626	58.733	75.704	1.00	65.81	C
ATOM	12437	CG	GLN	D	16	64.952	58.300	75.040	1.00	71.75	C
ATOM	12440	CD	GLN	D	16	65.920	58.044	76.159	1.00	80.91	C
ATOM	12441	OE1	GLN	D	16	65.494	58.154	77.339	1.00	85.18	O
ATOM	12442	NE2	GLN	D	16	67.191	57.708	75.856	1.00	83.89	N
ATOM	12445	C	GLN	D	16	61.346	58.241	74.614	1.00	57.84	C
ATOM	12446	O	GLN	D	16	60.221	58.667	74.789	1.00	56.16	O
ATOM	12447	N	SER	D	17	61.557	56.958	74.323	1.00	56.20	N
ATOM	12449	CA	SER	D	17	60.435	56.035	74.025	1.00	53.11	C
ATOM	12451	CB	SER	D	17	60.826	55.185	72.839	1.00	53.56	C
ATOM	12454	OG	SER	D	17	61.347	53.954	73.336	1.00	55.78	O
ATOM	12456	C	SER	D	17	59.885	55.054	75.152	1.00	50.62	C
ATOM	12457	O	SER	D	17	60.571	54.565	75.997	1.00	53.47	O
ATOM	12458	N	LEU	D	18	58.624	54.752	75.101	1.00	46.73	N
ATOM	12460	CA	LEU	D	18	57.978	53.917	76.046	1.00	44.77	C
ATOM	12462	CB	LEU	D	18	56.567	54.511	76.298	1.00	42.30	C
ATOM	12465	CG	LEU	D	18	55.563	53.620	76.986	1.00	40.07	C
ATOM	12467	CD1	LEU	D	18	56.090	53.066	78.283	1.00	41.41	C
ATOM	12471	CD2	LEU	D	18	54.332	54.437	77.255	1.00	41.25	C
ATOM	12475	C	LEU	D	18	57.806	52.599	75.327	1.00	43.93	C
ATOM	12476	O	LEU	D	18	57.148	52.565	74.292	1.00	42.76	O
ATOM	12477	N	SER	D	19	58.323	51.506	75.879	1.00	44.90	N
ATOM	12479	CA	SER	D	19	58.085	50.145	75.341	1.00	43.56	C
ATOM	12481	CB	SER	D	19	59.401	49.524	74.816	1.00	46.48	C
ATOM	12484	OG	SER	D	19	59.933	50.140	73.634	1.00	46.71	O
ATOM	12486	C	SER	D	19	57.448	49.240	76.426	1.00	42.19	C
ATOM	12487	O	SER	D	19	57.952	49.152	77.562	1.00	44.56	O
ATOM	12488	N	ILE	D	20	56.343	48.596	76.071	1.00	39.20	N
ATOM	12490	CA	ILE	D	20	55.610	47.698	76.923	1.00	38.53	C
ATOM	12492	CB	ILE	D	20	54.240	48.329	77.293	1.00	37.18	C
ATOM	12494	CG1	ILE	D	20	54.377	49.567	78.173	1.00	37.34	C
ATOM	12497	CD1	ILE	D	20	53.211	50.449	78.017	1.00	39.17	C
ATOM	12501	CG2	ILE	D	20	53.280	47.309	78.017	1.00	37.55	C
ATOM	12505	C	ILE	D	20	55.324	46.437	76.164	1.00	38.06	C
ATOM	12506	O	ILE	D	20	54.932	46.471	75.000	1.00	36.64	O
ATOM	12507	N	THR	D	21	55.441	45.303	76.835	1.00	40.37	N
ATOM	12509	CA	THR	D	21	55.088	44.001	76.249	1.00	41.04	C
ATOM	12511	CB	THR	D	21	56.261	43.068	76.450	1.00	43.74	C

ATOM	12513	OG1	THR	D	21	57.415	43.589	75.748	1.00	46.48	O
ATOM	12515	CG2	THR	D	21	55.958	41.774	75.812	1.00	45.01	C
ATOM	12519	C	THR	D	21	53.813	43.430	76.933	1.00	40.58	C
ATOM	12520	O	THR	D	21	53.626	43.567	78.162	1.00	41.40	O
ATOM	12521	N	CYS	D	22	52.939	42.816	76.145	1.00	39.61	N
ATOM	12523	CA	CYS	D	22	51.711	42.179	76.631	1.00	39.65	C
ATOM	12525	CB	CYS	D	22	50.514	42.703	75.891	1.00	36.18	C
ATOM	12528	SG	CYS	D	22	48.888	42.439	76.557	1.00	40.37	S
ATOM	12529	C	CYS	D	22	51.943	40.719	76.274	1.00	41.94	C
ATOM	12530	O	CYS	D	22	51.961	40.359	75.089	1.00	42.48	O
ATOM	12531	N	THR	D	23	52.199	39.891	77.285	1.00	43.68	N
ATOM	12533	CA	THR	D	23	52.093	38.468	77.096	1.00	45.36	C
ATOM	12535	CB	THR	D	23	53.107	37.752	77.925	1.00	48.80	C
ATOM	12537	OG1	THR	D	23	54.348	38.483	77.823	1.00	53.25	O
ATOM	12539	CG2	THR	D	23	53.391	36.405	77.328	1.00	48.29	C
ATOM	12543	C	THR	D	23	50.749	37.970	77.417	1.00	44.01	C
ATOM	12544	O	THR	D	23	50.309	38.115	78.469	1.00	45.58	O
ATOM	12545	N	VAL	D	24	50.189	37.240	76.505	1.00	44.18	N
ATOM	12547	CA	VAL	D	24	48.801	36.874	76.441	1.00	43.47	C
ATOM	12549	CB	VAL	D	24	48.356	37.223	74.983	1.00	41.96	C
ATOM	12551	CG1	VAL	D	24	47.387	36.320	74.500	1.00	46.10	C
ATOM	12555	CG2	VAL	D	24	47.785	38.612	74.857	1.00	38.96	C
ATOM	12559	C	VAL	D	24	48.716	35.342	76.633	1.00	45.93	C
ATOM	12560	O	VAL	D	24	49.555	34.625	76.140	1.00	47.90	O
ATOM	12561	N	SER	D	25	47.696	34.840	77.320	1.00	46.33	N
ATOM	12563	CA	SER	D	25	47.435	33.388	77.384	1.00	48.67	C
ATOM	12565	CB	SER	D	25	48.043	32.805	78.617	1.00	51.18	C
ATOM	12568	OG	SER	D	25	47.357	33.326	79.724	1.00	50.94	O
ATOM	12570	C	SER	D	25	45.932	33.060	77.394	1.00	47.97	C
ATOM	12571	O	SER	D	25	45.123	33.821	77.850	1.00	46.72	O
ATOM	12572	N	GLY	D	26	45.566	31.903	76.896	1.00	49.61	N
ATOM	12574	CA	GLY	D	26	44.195	31.497	76.922	1.00	49.63	C
ATOM	12577	C	GLY	D	26	43.485	31.917	75.682	1.00	47.39	C
ATOM	12578	O	GLY	D	26	42.289	31.683	75.579	1.00	48.65	O
ATOM	12579	N	PHE	D	27	44.175	32.578	74.766	1.00	44.85	N
ATOM	12581	CA	PHE	D	27	43.678	32.695	73.407	1.00	42.48	C
ATOM	12583	CB	PHE	D	27	42.750	33.823	73.310	1.00	38.91	C
ATOM	12586	CG	PHE	D	27	43.398	35.137	73.470	1.00	37.97	C
ATOM	12587	CD1	PHE	D	27	43.723	35.946	72.327	1.00	36.52	C
ATOM	12589	CE1	PHE	D	27	44.286	37.244	72.465	1.00	32.40	C
ATOM	12591	CZ	PHE	D	27	44.529	37.730	73.713	1.00	33.39	C
ATOM	12593	CE2	PHE	D	27	44.200	36.928	74.876	1.00	36.37	C
ATOM	12595	CD2	PHE	D	27	43.631	35.636	74.733	1.00	37.60	C
ATOM	12597	C	PHE	D	27	44.849	32.968	72.521	1.00	42.29	C
ATOM	12598	O	PHE	D	27	45.885	33.253	73.043	1.00	43.18	O
ATOM	12599	N	SER	D	28	44.701	32.894	71.199	1.00	41.48	N
ATOM	12601	CA	SER	D	28	45.787	33.229	70.284	1.00	41.06	C
ATOM	12603	CB	SER	D	28	46.052	32.076	69.303	1.00	43.62	C
ATOM	12606	OG	SER	D	28	45.379	32.165	68.103	1.00	42.29	O
ATOM	12608	C	SER	D	28	45.579	34.557	69.592	1.00	38.22	C
ATOM	12609	O	SER	D	28	44.467	34.940	69.333	1.00	36.54	O
ATOM	12610	N	LEU	D	29	46.675	35.275	69.369	1.00	38.34	N
ATOM	12612	CA	LEU	D	29	46.673	36.543	68.643	1.00	36.43	C
ATOM	12614	CB	LEU	D	29	48.007	37.269	68.769	1.00	35.93	C
ATOM	12617	CG	LEU	D	29	48.340	37.596	70.229	1.00	37.34	C
ATOM	12619	CD1	LEU	D	29	49.853	37.698	70.436	1.00	42.57	C
ATOM	12623	CD2	LEU	D	29	47.767	38.823	70.769	1.00	35.50	C
ATOM	12627	C	LEU	D	29	46.360	36.329	67.182	1.00	36.97	C
ATOM	12628	O	LEU	D	29	46.087	37.243	66.425	1.00	36.62	O
ATOM	12629	N	THR	D	30	46.351	35.089	66.796	1.00	39.55	N
ATOM	12631	CA	THR	D	30	45.918	34.679	65.473	1.00	39.97	C
ATOM	12633	CB	THR	D	30	46.294	33.210	65.329	1.00	43.13	C
ATOM	12635	OG1	THR	D	30	47.406	33.151	64.447	1.00	45.16	O
ATOM	12637	CG2	THR	D	30	45.192	32.267	64.762	1.00	43.76	C
ATOM	12641	C	THR	D	30	44.454	34.936	65.221	1.00	38.74	C
ATOM	12642	O	THR	D	30	44.112	35.136	64.063	1.00	39.61	O
ATOM	12643	N	ASN	D	31	43.611	34.983	66.267	1.00	37.45	N
ATOM	12645	CA	ASN	D	31	42.163	35.188	66.094	1.00	36.67	C

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ATOM 12647  CB  ASN D  31      41.384  34.034  66.706  1.00 38.21           C
ATOM 12650  CG  ASN D  31      41.839  32.691  66.202  1.00 40.54           C
ATOM 12651  OD1 ASN D  31      42.034  32.490  64.993  1.00 41.36           O
ATOM 12652  ND2 ASN D  31      42.022  31.763  67.125  1.00 40.98           N
ATOM 12655  C   ASN D  31      41.563  36.434  66.711  1.00 34.82           C
ATOM 12656  O   ASN D  31      40.386  36.809  66.403  1.00 34.97           O
ATOM 12657  N   TYR D  32      42.328  37.047  67.606  1.00 33.79           N
ATOM 12659  CA  TYR D  32      41.897  38.238  68.386  1.00 31.32           C
ATOM 12661  CB  TYR D  32      41.680  37.931  69.881  1.00 30.94           C
ATOM 12664  CG  TYR D  32      40.436  37.197  70.158  1.00 31.75           C
ATOM 12665  CD1 TYR D  32      40.437  35.834  70.261  1.00 35.96           C
ATOM 12667  CE1 TYR D  32      39.263  35.109  70.544  1.00 37.48           C
ATOM 12669  CZ  TYR D  32      38.076  35.762  70.634  1.00 38.25           C
ATOM 12670  OH  TYR D  32      36.944  35.006  70.814  1.00 42.78           O
ATOM 12672  CE2 TYR D  32      38.032  37.152  70.457  1.00 36.56           C
ATOM 12674  CD2 TYR D  32      39.225  37.857  70.249  1.00 33.48           C
ATOM 12676  C   TYR D  32      42.934  39.293  68.222  1.00 29.57           C
ATOM 12677  O   TYR D  32      44.098  38.983  68.095  1.00 32.81           O
ATOM 12678  N   GLY D  33      42.505  40.521  68.175  1.00 27.55           N
ATOM 12680  CA  GLY D  33      43.339  41.698  68.179  1.00 27.54           C
ATOM 12683  C   GLY D  33      43.622  42.083  69.643  1.00 28.10           C
ATOM 12684  O   GLY D  33      42.841  41.699  70.478  1.00 28.48           O
ATOM 12685  N   VAL D  34      44.747  42.753  69.946  1.00 28.42           N
ATOM 12687  CA  VAL D  34      44.978  43.335  71.246  1.00 28.37           C
ATOM 12689  CB  VAL D  34      46.329  42.870  71.774  1.00 29.29           C
ATOM 12691  CG1 VAL D  34      46.618  43.435  73.133  1.00 29.09           C
ATOM 12695  CG2 VAL D  34      46.332  41.434  71.903  1.00 31.00           C
ATOM 12699  C   VAL D  34      44.958  44.866  71.101  1.00 28.37           C
ATOM 12700  O   VAL D  34      45.624  45.432  70.231  1.00 28.84           O
ATOM 12701  N   HIS D  35      44.195  45.528  71.940  1.00 28.35           N
ATOM 12703  CA  HIS D  35      44.057  46.977  71.908  1.00 29.07           C
ATOM 12705  CB  HIS D  35      42.582  47.405  72.135  1.00 28.80           C
ATOM 12708  CG  HIS D  35      41.629  46.857  71.124  1.00 28.13           C
ATOM 12709  ND1 HIS D  35      41.245  47.557  70.018  1.00 28.65           N
ATOM 12711  CE1 HIS D  35      40.387  46.852  69.309  1.00 28.35           C
ATOM 12713  NE2 HIS D  35      40.220  45.689  69.902  1.00 29.20           N
ATOM 12715  CD2 HIS D  35      40.962  45.687  71.062  1.00 30.52           C
ATOM 12717  C   HIS D  35      44.914  47.588  72.996  1.00 30.05           C
ATOM 12718  O   HIS D  35      45.252  46.902  73.960  1.00 31.00           O
ATOM 12719  N   TRP D  36      45.198  48.891  72.888  1.00 30.37           N
ATOM 12721  CA  TRP D  36      45.968  49.637  73.896  1.00 30.27           C
ATOM 12723  CB  TRP D  36      47.309  50.002  73.310  1.00 30.97           C
ATOM 12726  CG  TRP D  36      48.150  48.741  73.152  1.00 33.79           C
ATOM 12727  CD1 TRP D  36      48.170  47.889  72.086  1.00 35.19           C
ATOM 12729  NE1 TRP D  36      49.026  46.835  72.340  1.00 35.82           N
ATOM 12731  CE2 TRP D  36      49.551  46.981  73.589  1.00 34.05           C
ATOM 12732  CD2 TRP D  36      49.040  48.169  74.124  1.00 33.66           C
ATOM 12733  CE3 TRP D  36      49.467  48.562  75.374  1.00 33.15           C
ATOM 12735  CZ3 TRP D  36      50.354  47.796  76.024  1.00 37.51           C
ATOM 12737  CH2 TRP D  36      50.881  46.636  75.451  1.00 38.07           C
ATOM 12739  CZ2 TRP D  36      50.470  46.216  74.235  1.00 37.73           C
ATOM 12741  C   TRP D  36      45.246  50.892  74.309  1.00 30.62           C
ATOM 12742  O   TRP D  36      44.780  51.687  73.485  1.00 31.69           O
ATOM 12743  N   VAL D  37      45.089  51.077  75.591  1.00 30.38           N
ATOM 12745  CA  VAL D  37      44.250  52.184  76.057  1.00 30.87           C
ATOM 12747  CB  VAL D  37      42.965  51.664  76.601  1.00 30.04           C
ATOM 12749  CG1 VAL D  37      42.249  52.681  77.266  1.00 29.29           C
ATOM 12753  CG2 VAL D  37      42.196  51.029  75.509  1.00 29.91           C
ATOM 12757  C   VAL D  37      45.001  52.685  77.207  1.00 32.03           C
ATOM 12758  O   VAL D  37      45.581  51.865  77.898  1.00 33.02           O
ATOM 12759  N   ARG D  38      44.997  53.987  77.438  1.00 32.94           N
ATOM 12761  CA  ARG D  38      45.661  54.526  78.606  1.00 34.28           C
ATOM 12763  CB  ARG D  38      46.875  55.319  78.163  1.00 35.74           C
ATOM 12766  CG  ARG D  38      46.557  56.678  77.574  1.00 36.42           C
ATOM 12769  CD  ARG D  38      47.776  57.442  77.251  1.00 36.01           C
ATOM 12772  NE  ARG D  38      47.459  58.672  76.558  1.00 38.09           N
ATOM 12774  CZ  ARG D  38      48.345  59.511  76.121  1.00 36.79           C
ATOM 12775  NH1 ARG D  38      49.623  59.276  76.303  1.00 39.89           N
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ATOM	12778	NH2	ARG	D	38	47.960	60.562	75.501	1.00	38.50	N
ATOM	12781	C	ARG	D	38	44.763	55.369	79.527	1.00	34.80	C
ATOM	12782	O	ARG	D	38	43.781	55.900	79.125	1.00	33.76	O
ATOM	12783	N	GLN	D	39	45.159	55.528	80.755	1.00	35.60	N
ATOM	12785	CA	GLN	D	39	44.335	56.277	81.633	1.00	38.73	C
ATOM	12787	CB	GLN	D	39	43.724	55.284	82.598	1.00	39.56	C
ATOM	12790	CG	GLN	D	39	42.743	55.887	83.573	1.00	41.47	C
ATOM	12793	CD	GLN	D	39	42.015	54.861	84.346	1.00	40.76	C
ATOM	12794	OE1	GLN	D	39	42.588	53.843	84.731	1.00	40.61	O
ATOM	12795	NE2	GLN	D	39	40.736	55.120	84.599	1.00	45.06	N
ATOM	12798	C	GLN	D	39	45.148	57.376	82.371	1.00	41.44	C
ATOM	12799	O	GLN	D	39	46.199	57.117	82.951	1.00	41.23	O
ATOM	12800	N	SER	D	40	44.701	58.612	82.294	1.00	43.95	N
ATOM	12802	CA	SER	D	40	45.297	59.665	83.117	1.00	48.33	C
ATOM	12804	CB	SER	D	40	45.996	60.801	82.338	1.00	49.57	C
ATOM	12807	OG	SER	D	40	45.266	61.127	81.159	1.00	48.49	O
ATOM	12809	C	SER	D	40	44.162	60.222	83.917	1.00	51.39	C
ATOM	12810	O	SER	D	40	43.005	60.374	83.420	1.00	53.29	O
ATOM	12811	N	PRO	D	41	44.470	60.547	85.153	1.00	53.68	N
ATOM	12812	CA	PRO	D	41	43.423	60.996	86.069	1.00	57.08	C
ATOM	12814	CB	PRO	D	41	44.192	61.252	87.364	1.00	58.57	C
ATOM	12817	CG	PRO	D	41	45.528	61.522	86.889	1.00	57.21	C
ATOM	12820	CD	PRO	D	41	45.811	60.620	85.736	1.00	53.85	C
ATOM	12823	C	PRO	D	41	42.753	62.260	85.443	1.00	59.94	C
ATOM	12824	O	PRO	D	41	41.491	62.335	85.416	1.00	60.69	O
ATOM	12825	N	GLY	D	42	43.616	63.113	84.835	1.00	61.45	N
ATOM	12827	CA	GLY	D	42	43.269	64.364	84.131	1.00	64.05	C
ATOM	12830	C	GLY	D	42	42.483	64.364	82.805	1.00	63.41	C
ATOM	12831	O	GLY	D	42	41.364	64.858	82.825	1.00	65.45	O
ATOM	12832	N	LYS	D	43	43.023	63.893	81.661	1.00	60.97	N
ATOM	12834	CA	LYS	D	43	42.118	63.505	80.546	1.00	59.80	C
ATOM	12836	CB	LYS	D	43	42.851	63.131	79.232	1.00	57.52	C
ATOM	12843	C	LYS	D	43	41.186	62.352	81.078	1.00	58.39	C
ATOM	12844	O	LYS	D	43	40.305	62.593	82.000	1.00	63.11	O
ATOM	12845	N	GLY	D	44	41.315	61.144	80.548	1.00	53.00	N
ATOM	12847	CA	GLY	D	44	40.557	60.047	81.120	1.00	51.14	C
ATOM	12850	C	GLY	D	44	41.027	58.728	80.530	1.00	47.33	C
ATOM	12851	O	GLY	D	44	42.277	58.557	80.366	1.00	46.03	O
ATOM	12852	N	LEU	D	45	40.088	57.808	80.217	1.00	44.05	N
ATOM	12854	CA	LEU	D	45	40.455	56.553	79.559	1.00	40.18	C
ATOM	12856	CB	LEU	D	45	39.386	55.575	79.824	1.00	39.67	C
ATOM	12859	CG	LEU	D	45	39.601	54.171	80.329	1.00	38.63	C
ATOM	12861	CD1	LEU	D	45	40.898	53.853	80.863	1.00	37.61	C
ATOM	12865	CD2	LEU	D	45	38.510	54.020	81.401	1.00	42.06	C
ATOM	12869	C	LEU	D	45	40.553	56.808	78.075	1.00	38.78	C
ATOM	12870	O	LEU	D	45	39.585	57.217	77.474	1.00	42.37	O
ATOM	12871	N	GLU	D	46	41.683	56.616	77.442	1.00	36.39	N
ATOM	12873	CA	GLU	D	46	41.756	56.917	76.023	1.00	36.08	C
ATOM	12875	CB	GLU	D	46	42.482	58.195	75.876	1.00	38.06	C
ATOM	12878	CG	GLU	D	46	42.640	58.660	74.466	1.00	43.17	C
ATOM	12881	CD	GLU	D	46	43.757	59.721	74.236	1.00	49.47	C
ATOM	12882	OE1	GLU	D	46	44.654	59.993	75.192	1.00	44.91	O
ATOM	12883	OE2	GLU	D	46	43.686	60.248	73.037	1.00	46.97	O
ATOM	12884	C	GLU	D	46	42.359	55.793	75.169	1.00	32.98	C
ATOM	12885	O	GLU	D	46	43.347	55.226	75.508	1.00	31.48	O
ATOM	12886	N	TRP	D	47	41.679	55.438	74.096	1.00	32.53	N
ATOM	12888	CA	TRP	D	47	42.154	54.391	73.191	1.00	32.16	C
ATOM	12890	CB	TRP	D	47	41.001	53.746	72.467	1.00	31.08	C
ATOM	12893	CG	TRP	D	47	41.254	52.697	71.439	1.00	30.69	C
ATOM	12894	CD1	TRP	D	47	41.205	51.356	71.611	1.00	30.28	C
ATOM	12896	NE1	TRP	D	47	41.413	50.701	70.416	1.00	29.31	N
ATOM	12898	CE2	TRP	D	47	41.587	51.627	69.432	1.00	29.06	C
ATOM	12899	CD2	TRP	D	47	41.481	52.897	70.034	1.00	33.41	C
ATOM	12900	CE3	TRP	D	47	41.626	54.035	69.212	1.00	36.15	C
ATOM	12902	CZ3	TRP	D	47	41.836	53.864	67.825	1.00	32.52	C
ATOM	12904	CH2	TRP	D	47	41.916	52.607	67.285	1.00	30.16	C
ATOM	12906	CZ2	TRP	D	47	41.785	51.466	68.079	1.00	29.39	C
ATOM	12908	C	TRP	D	47	43.269	54.825	72.197	1.00	32.70	C

ATOM	12909	O	TRP	D	47	43.190	55.885	71.523	1.00	32.87	O
ATOM	12910	N	LEU	D	48	44.322	53.995	72.178	1.00	31.73	N
ATOM	12912	CA	LEU	D	48	45.556	54.317	71.463	1.00	32.99	C
ATOM	12914	CB	LEU	D	48	46.776	53.933	72.280	1.00	32.64	C
ATOM	12917	CG	LEU	D	48	46.758	54.648	73.611	1.00	32.13	C
ATOM	12919	CD1	LEU	D	48	47.957	54.186	74.392	1.00	32.17	C
ATOM	12923	CD2	LEU	D	48	46.771	56.119	73.414	1.00	32.53	C
ATOM	12927	C	LEU	D	48	45.631	53.665	70.121	1.00	32.70	C
ATOM	12928	O	LEU	D	48	45.921	54.298	69.140	1.00	32.71	O
ATOM	12929	N	GLY	D	49	45.363	52.376	70.092	1.00	32.34	N
ATOM	12931	CA	GLY	D	49	45.225	51.704	68.809	1.00	32.63	C
ATOM	12934	C	GLY	D	49	45.081	50.210	68.962	1.00	31.13	C
ATOM	12935	O	GLY	D	49	44.752	49.728	70.032	1.00	30.55	O
ATOM	12936	N	VAL	D	50	45.357	49.499	67.880	1.00	30.69	N
ATOM	12938	CA	VAL	D	50	45.234	48.071	67.858	1.00	29.69	C
ATOM	12940	CB	VAL	D	50	43.921	47.569	67.214	1.00	30.33	C
ATOM	12942	CG1	VAL	D	50	43.191	46.659	68.168	1.00	29.69	C
ATOM	12946	CG2	VAL	D	50	43.087	48.640	66.687	1.00	30.44	C
ATOM	12950	C	VAL	D	50	46.227	47.452	66.954	1.00	29.44	C
ATOM	12951	O	VAL	D	50	46.492	47.957	65.895	1.00	28.43	O
ATOM	12952	N	ILE	D	51	46.704	46.296	67.352	1.00	29.83	N
ATOM	12954	CA	ILE	D	51	47.217	45.344	66.382	1.00	31.60	C
ATOM	12956	CB	ILE	D	51	48.621	44.854	66.705	1.00	32.32	C
ATOM	12958	CG1	ILE	D	51	49.185	44.059	65.511	1.00	36.70	C
ATOM	12961	CD1	ILE	D	51	50.707	43.620	65.590	1.00	32.82	C
ATOM	12965	CG2	ILE	D	51	48.644	43.931	67.879	1.00	32.72	C
ATOM	12969	C	ILE	D	51	46.179	44.218	66.317	1.00	31.06	C
ATOM	12970	O	ILE	D	51	46.002	43.445	67.231	1.00	30.75	O
ATOM	12971	N	TRP	D	52	45.439	44.247	65.242	1.00	31.60	N
ATOM	12973	CA	TRP	D	52	44.467	43.230	64.869	1.00	31.36	C
ATOM	12975	CB	TRP	D	52	43.712	43.639	63.636	1.00	30.90	C
ATOM	12978	CG	TRP	D	52	42.953	44.914	63.709	1.00	29.08	C
ATOM	12979	CD1	TRP	D	52	43.219	46.097	63.033	1.00	28.04	C
ATOM	12981	NE1	TRP	D	52	42.243	47.006	63.289	1.00	26.54	N
ATOM	12983	CE2	TRP	D	52	41.321	46.397	64.086	1.00	25.66	C
ATOM	12984	CD2	TRP	D	52	41.738	45.097	64.333	1.00	26.15	C
ATOM	12985	CE3	TRP	D	52	40.927	44.278	65.103	1.00	29.06	C
ATOM	12987	CZ3	TRP	D	52	39.779	44.803	65.625	1.00	26.64	C
ATOM	12989	CH2	TRP	D	52	39.417	46.068	65.353	1.00	27.20	C
ATOM	12991	CZ2	TRP	D	52	40.166	46.880	64.583	1.00	28.98	C
ATOM	12993	C	TRP	D	52	45.108	41.895	64.531	1.00	32.27	C
ATOM	12994	O	TRP	D	52	46.307	41.779	64.320	1.00	32.72	O
ATOM	12995	N	SER	D	53	44.227	40.915	64.488	1.00	32.74	N
ATOM	12997	CA	SER	D	53	44.580	39.525	64.425	1.00	34.75	C
ATOM	12999	CB	SER	D	53	43.298	38.681	64.426	1.00	35.90	C
ATOM	13002	OG	SER	D	53	42.764	38.516	63.151	1.00	37.74	O
ATOM	13004	C	SER	D	53	45.454	39.204	63.274	1.00	35.30	C
ATOM	13005	O	SER	D	53	46.503	38.646	63.451	1.00	37.19	O
ATOM	13006	N	GLY	D	54	45.092	39.637	62.083	1.00	35.49	N
ATOM	13008	CA	GLY	D	54	45.992	39.425	60.943	1.00	35.48	C
ATOM	13011	C	GLY	D	54	47.220	40.303	60.835	1.00	34.39	C
ATOM	13012	O	GLY	D	54	47.807	40.343	59.768	1.00	36.25	O
ATOM	13013	N	GLY	D	55	47.614	40.991	61.899	1.00	32.23	N
ATOM	13015	CA	GLY	D	55	48.901	41.684	61.913	1.00	33.48	C
ATOM	13018	C	GLY	D	55	48.859	43.138	61.531	1.00	33.28	C
ATOM	13019	O	GLY	D	55	49.752	43.862	61.701	1.00	33.23	O
ATOM	13020	N	ASN	D	56	47.752	43.574	61.012	1.00	33.55	N
ATOM	13022	CA	ASN	D	56	47.664	44.924	60.574	1.00	35.11	C
ATOM	13024	CB	ASN	D	56	46.626	45.025	59.499	1.00	34.70	C
ATOM	13027	CG	ASN	D	56	45.305	44.633	59.959	1.00	35.37	C
ATOM	13028	OD1	ASN	D	56	44.385	45.451	59.883	1.00	40.28	O
ATOM	13029	ND2	ASN	D	56	45.122	43.357	60.343	1.00	36.56	N
ATOM	13032	C	ASN	D	56	47.347	45.795	61.765	1.00	34.36	C
ATOM	13033	O	ASN	D	56	46.820	45.268	62.750	1.00	33.78	O
ATOM	13034	N	THR	D	57	47.669	47.100	61.710	1.00	34.41	N
ATOM	13036	CA	THR	D	57	47.319	47.969	62.842	1.00	32.78	C
ATOM	13038	CB	THR	D	57	48.563	48.487	63.562	1.00	32.50	C
ATOM	13040	OG1	THR	D	57	49.303	49.334	62.711	1.00	34.26	O

ATOM	13042	CG2	THR	D	57	49.505	47.392	63.858	1.00	33.15	C
ATOM	13046	C	THR	D	57	46.377	49.127	62.532	1.00	32.96	C
ATOM	13047	O	THR	D	57	46.016	49.401	61.417	1.00	34.56	O
ATOM	13048	N	ASP	D	58	45.957	49.794	63.572	1.00	32.56	N
ATOM	13050	CA	ASP	D	58	45.262	51.043	63.418	1.00	33.53	C
ATOM	13052	CB	ASP	D	58	43.805	50.801	63.352	1.00	32.81	C
ATOM	13055	CG	ASP	D	58	43.086	51.930	62.805	1.00	35.44	C
ATOM	13056	OD1	ASP	D	58	43.702	52.786	62.201	1.00	39.99	O
ATOM	13057	OD2	ASP	D	58	41.850	52.052	62.880	1.00	44.18	O
ATOM	13058	C	ASP	D	58	45.555	51.858	64.639	1.00	34.20	C
ATOM	13059	O	ASP	D	58	45.601	51.348	65.789	1.00	33.15	O
ATOM	13060	N	TYR	D	59	45.757	53.139	64.413	1.00	36.15	N
ATOM	13062	CA	TYR	D	59	46.178	54.024	65.491	1.00	35.91	C
ATOM	13064	CB	TYR	D	59	47.573	54.426	65.247	1.00	36.57	C
ATOM	13067	CG	TYR	D	59	48.572	53.328	65.088	1.00	37.04	C
ATOM	13068	CD1	TYR	D	59	49.590	53.425	64.103	1.00	40.41	C
ATOM	13070	CE1	TYR	D	59	50.555	52.505	63.961	1.00	38.26	C
ATOM	13072	CZ	TYR	D	59	50.592	51.439	64.807	1.00	36.55	C
ATOM	13073	OH	TYR	D	59	51.546	50.524	64.623	1.00	38.64	O
ATOM	13075	CE2	TYR	D	59	49.668	51.275	65.780	1.00	36.05	C
ATOM	13077	CD2	TYR	D	59	48.620	52.260	65.935	1.00	36.55	C
ATOM	13079	C	TYR	D	59	45.335	55.284	65.529	1.00	36.81	C
ATOM	13080	O	TYR	D	59	45.092	55.899	64.524	1.00	38.49	O
ATOM	13081	N	ASN	D	60	44.888	55.660	66.710	1.00	36.57	N
ATOM	13083	CA	ASN	D	60	44.107	56.894	66.906	1.00	38.17	C
ATOM	13085	CB	ASN	D	60	43.885	57.030	68.383	1.00	37.59	C
ATOM	13088	CG	ASN	D	60	42.742	57.873	68.742	1.00	39.27	C
ATOM	13089	OD1	ASN	D	60	42.805	58.492	67.928	1.00	42.52	O
ATOM	13090	ND2	ASN	D	60	42.533	57.895	70.029	1.00	40.55	N
ATOM	13093	C	ASN	D	60	44.905	58.075	66.418	1.00	39.85	C
ATOM	13094	O	ASN	D	60	46.085	58.121	66.619	1.00	40.65	O
ATOM	13095	N	THR	D	61	44.255	59.004	65.783	1.00	41.38	N
ATOM	13097	CA	THR	D	61	44.885	60.081	65.089	1.00	45.06	C
ATOM	13099	CB	THR	D	61	43.838	61.144	64.787	1.00	48.42	C
ATOM	13101	OG1	THR	D	61	42.731	60.516	64.121	1.00	47.87	O
ATOM	13103	CG2	THR	D	61	44.366	62.233	63.789	1.00	52.40	C
ATOM	13107	C	THR	D	61	46.027	60.733	65.763	1.00	46.36	C
ATOM	13108	O	THR	D	61	47.100	60.937	65.152	1.00	48.83	O
ATOM	13109	N	PRO	D	62	45.936	61.148	66.995	1.00	47.67	N
ATOM	13110	CA	PRO	D	62	47.106	61.814	67.621	1.00	49.35	C
ATOM	13112	CB	PRO	D	62	46.538	62.388	68.924	1.00	49.55	C
ATOM	13115	CG	PRO	D	62	45.387	61.448	69.263	1.00	47.57	C
ATOM	13118	CD	PRO	D	62	44.769	61.089	67.900	1.00	47.33	C
ATOM	13121	C	PRO	D	62	48.301	60.936	67.935	1.00	47.56	C
ATOM	13122	O	PRO	D	62	49.297	61.412	68.435	1.00	49.85	O
ATOM	13123	N	PHE	D	63	48.225	59.660	67.661	1.00	45.89	N
ATOM	13125	CA	PHE	D	63	49.354	58.776	67.922	1.00	45.48	C
ATOM	13127	CB	PHE	D	63	48.993	57.694	69.022	1.00	42.86	C
ATOM	13130	CG	PHE	D	63	48.348	58.264	70.261	1.00	41.77	C
ATOM	13131	CD1	PHE	D	63	46.985	58.211	70.441	1.00	37.08	C
ATOM	13133	CE1	PHE	D	63	46.398	58.790	71.575	1.00	38.67	C
ATOM	13135	CZ	PHE	D	63	47.145	59.418	72.527	1.00	37.15	C
ATOM	13137	CE2	PHE	D	63	48.487	59.515	72.346	1.00	41.21	C
ATOM	13139	CD2	PHE	D	63	49.109	58.935	71.211	1.00	41.81	C
ATOM	13141	C	PHE	D	63	49.802	58.127	66.601	1.00	46.08	C
ATOM	13142	O	PHE	D	63	50.622	57.230	66.587	1.00	46.42	O
ATOM	13143	N	THR	D	64	49.300	58.568	65.480	1.00	47.62	N
ATOM	13145	CA	THR	D	64	49.712	57.961	64.240	1.00	49.13	C
ATOM	13147	CB	THR	D	64	48.972	58.633	63.160	1.00	51.36	C
ATOM	13149	OG1	THR	D	64	47.638	58.085	63.156	1.00	50.94	O
ATOM	13151	CG2	THR	D	64	49.591	58.313	61.782	1.00	54.91	C
ATOM	13155	C	THR	D	64	51.210	58.114	63.990	1.00	52.42	C
ATOM	13156	O	THR	D	64	51.907	57.193	63.532	1.00	53.42	O
ATOM	13157	N	SER	D	65	51.737	59.289	64.303	1.00	54.78	N
ATOM	13159	CA	SER	D	65	53.053	59.604	63.833	1.00	56.59	C
ATOM	13161	CB	SER	D	65	53.251	61.158	63.765	1.00	60.91	C
ATOM	13164	OG	SER	D	65	53.283	61.827	65.066	1.00	60.68	O
ATOM	13166	C	SER	D	65	54.083	58.943	64.716	1.00	54.95	C

ATOM	13167	O	SER	D	65	55.308	59.151	64.511	1.00	58.96	O
ATOM	13168	N	ARG	D	66	53.650	58.240	65.753	1.00	50.49	N
ATOM	13170	CA	ARG	D	66	54.617	57.976	66.852	1.00	50.01	C
ATOM	13172	CB	ARG	D	66	54.716	59.163	67.832	1.00	50.28	C
ATOM	13175	CG	ARG	D	66	53.473	59.338	68.681	1.00	49.71	C
ATOM	13178	CD	ARG	D	66	53.310	60.748	69.279	1.00	52.47	C
ATOM	13181	NE	ARG	D	66	53.856	60.823	70.640	1.00	51.78	N
ATOM	13183	CZ	ARG	D	66	53.150	60.998	71.750	1.00	50.52	C
ATOM	13184	NH1	ARG	D	66	51.848	61.166	71.744	1.00	52.35	N
ATOM	13187	NH2	ARG	D	66	53.760	61.064	72.902	1.00	52.82	N
ATOM	13190	C	ARG	D	66	54.356	56.697	67.597	1.00	46.69	C
ATOM	13191	O	ARG	D	66	55.145	56.247	68.434	1.00	46.16	O
ATOM	13192	N	LEU	D	67	53.265	56.067	67.250	1.00	44.55	N
ATOM	13194	CA	LEU	D	67	52.930	54.840	67.913	1.00	42.69	C
ATOM	13196	CB	LEU	D	67	51.444	54.918	68.365	1.00	40.49	C
ATOM	13199	CG	LEU	D	67	50.806	53.736	69.049	1.00	39.68	C
ATOM	13201	CD1	LEU	D	67	51.766	53.114	70.010	1.00	41.91	C
ATOM	13205	CD2	LEU	D	67	49.535	54.112	69.731	1.00	39.30	C
ATOM	13209	C	LEU	D	67	53.301	53.694	66.939	1.00	42.23	C
ATOM	13210	O	LEU	D	67	53.187	53.803	65.722	1.00	41.99	O
ATOM	13211	N	SER	D	68	53.814	52.615	67.484	1.00	41.73	N
ATOM	13213	CA	SER	D	68	53.956	51.426	66.679	1.00	42.24	C
ATOM	13215	CB	SER	D	68	55.369	51.322	66.097	1.00	44.65	C
ATOM	13218	OG	SER	D	68	56.007	50.216	66.719	1.00	44.64	O
ATOM	13220	C	SER	D	68	53.670	50.202	67.537	1.00	40.14	C
ATOM	13221	O	SER	D	68	54.406	49.959	68.458	1.00	41.75	O
ATOM	13222	N	ILE	D	69	52.646	49.430	67.192	1.00	38.16	N
ATOM	13224	CA	ILE	D	69	52.444	48.115	67.777	1.00	37.76	C
ATOM	13226	CB	ILE	D	69	51.042	47.962	68.094	1.00	35.22	C
ATOM	13228	CG1	ILE	D	69	50.542	49.253	68.763	1.00	35.84	C
ATOM	13231	CD1	ILE	D	69	49.059	49.374	69.024	1.00	34.14	C
ATOM	13235	CG2	ILE	D	69	50.941	46.834	69.044	1.00	36.27	C
ATOM	13239	C	ILE	D	69	52.930	46.915	66.909	1.00	39.46	C
ATOM	13240	O	ILE	D	69	52.799	46.952	65.673	1.00	41.51	O
ATOM	13241	N	ASN	D	70	53.501	45.877	67.523	1.00	39.23	N
ATOM	13243	CA	ASN	D	70	53.977	44.715	66.762	1.00	41.63	C
ATOM	13245	CB	ASN	D	70	55.460	44.779	66.533	1.00	44.84	C
ATOM	13248	CG	ASN	D	70	55.800	45.718	65.434	1.00	49.17	C
ATOM	13249	OD1	ASN	D	70	55.515	45.399	64.289	1.00	55.81	O
ATOM	13250	ND2	ASN	D	70	56.256	46.927	65.763	1.00	52.56	N
ATOM	13253	C	ASN	D	70	53.631	43.453	67.469	1.00	40.86	C
ATOM	13254	O	ASN	D	70	53.133	43.517	68.548	1.00	40.73	O
ATOM	13255	N	LYS	D	71	53.824	42.299	66.872	1.00	41.57	N
ATOM	13257	CA	LYS	D	71	53.571	41.114	67.652	1.00	41.77	C
ATOM	13259	CB	LYS	D	71	52.089	40.784	67.647	1.00	39.31	C
ATOM	13262	CG	LYS	D	71	51.532	40.227	66.385	1.00	38.04	C
ATOM	13265	CD	LYS	D	71	49.962	40.233	66.402	1.00	37.00	C
ATOM	13268	CE	LYS	D	71	49.309	39.359	65.314	1.00	34.15	C
ATOM	13271	NZ	LYS	D	71	47.935	39.378	65.457	1.00	32.61	N
ATOM	13275	C	LYS	D	71	54.304	39.898	67.162	1.00	45.31	C
ATOM	13276	O	LYS	D	71	54.644	39.819	66.008	1.00	47.02	O
ATOM	13277	N	ASP	D	72	54.499	38.940	68.061	1.00	46.92	N
ATOM	13279	CA	ASP	D	72	54.911	37.579	67.731	1.00	49.86	C
ATOM	13281	CB	ASP	D	72	56.252	37.312	68.418	1.00	52.20	C
ATOM	13284	CG	ASP	D	72	56.857	36.047	67.966	1.00	58.26	C
ATOM	13285	OD1	ASP	D	72	56.033	35.215	67.531	1.00	59.63	O
ATOM	13286	OD2	ASP	D	72	58.108	35.774	67.965	1.00	67.49	O
ATOM	13287	C	ASP	D	72	53.816	36.496	68.102	1.00	48.55	C
ATOM	13288	O	ASP	D	72	53.706	36.125	69.270	1.00	48.20	O
ATOM	13289	N	ASN	D	73	53.015	36.002	67.142	1.00	47.65	N
ATOM	13291	CA	ASN	D	73	51.975	35.023	67.542	1.00	47.21	C
ATOM	13293	CB	ASN	D	73	50.978	34.570	66.476	1.00	45.48	C
ATOM	13296	CG	ASN	D	73	50.327	35.684	65.713	1.00	43.16	C
ATOM	13297	OD1	ASN	D	73	49.630	36.539	66.293	1.00	47.44	O
ATOM	13298	ND2	ASN	D	73	50.408	35.612	64.406	1.00	39.25	N
ATOM	13301	C	ASN	D	73	52.598	33.748	68.083	1.00	51.12	C
ATOM	13302	O	ASN	D	73	51.987	33.107	68.883	1.00	52.43	O
ATOM	13303	N	SER	D	74	53.773	33.318	67.643	1.00	54.87	N

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ATOM 13305  CA  SER D  74      54.397  32.122  68.317  1.00 58.74           C
ATOM 13307  CB  SER D  74      55.773  31.817  67.787  1.00 62.13           C
ATOM 13310  OG  SER D  74      55.629  31.667  66.404  1.00 65.94           O
ATOM 13312  C   SER D  74      54.543  32.307  69.802  1.00 58.18           C
ATOM 13313  O   SER D  74      54.129  31.462  70.531  1.00 60.18           O
ATOM 13314  N   LYS D  75      55.131  33.421  70.238  1.00 56.43           N
ATOM 13316  CA  LYS D  75      55.368  33.665  71.639  1.00 56.60           C
ATOM 13318  CB  LYS D  75      56.566  34.600  71.806  1.00 57.02           C
ATOM 13321  CG  LYS D  75      57.816  33.999  71.324  1.00 62.21           C
ATOM 13324  CD  LYS D  75      58.969  34.990  71.079  1.00 65.08           C
ATOM 13327  CE  LYS D  75      60.071  34.308  70.161  1.00 69.37           C
ATOM 13330  NZ  LYS D  75      61.327  33.664  70.861  1.00 75.58           N
ATOM 13334  C   LYS D  75      54.153  34.295  72.277  1.00 53.67           C
ATOM 13335  O   LYS D  75      54.254  34.800  73.361  1.00 53.73           O
ATOM 13336  N   SER D  76      52.997  34.249  71.621  1.00 52.05           N
ATOM 13338  CA  SER D  76      51.836  35.122  71.941  1.00 48.62           C
ATOM 13340  CB  SER D  76      50.739  34.328  72.636  1.00 48.74           C
ATOM 13343  OG  SER D  76      51.376  33.677  73.649  1.00 52.34           O
ATOM 13345  C   SER D  76      52.224  36.397  72.744  1.00 46.65           C
ATOM 13346  O   SER D  76      51.862  36.571  73.915  1.00 45.12           O
ATOM 13347  N   GLN D  77      52.938  37.285  72.056  1.00 45.21           N
ATOM 13349  CA  GLN D  77      53.433  38.479  72.656  1.00 43.66           C
ATOM 13351  CB  GLN D  77      54.970  38.339  72.814  1.00 46.88           C
ATOM 13354  CG  GLN D  77      55.413  37.830  74.223  1.00 47.53           C
ATOM 13357  CD  GLN D  77      56.927  37.700  74.397  1.00 49.35           C
ATOM 13358  OE1 GLN D  77      57.662  37.900  73.452  1.00 49.14           O
ATOM 13359  NE2 GLN D  77      57.377  37.335  75.607  1.00 49.80           N
ATOM 13362  C   GLN D  77      53.046  39.686  71.801  1.00 40.90           C
ATOM 13363  O   GLN D  77      53.118  39.637  70.599  1.00 39.78           O
ATOM 13364  N   VAL D  78      52.621  40.767  72.441  1.00 39.44           N
ATOM 13366  CA  VAL D  78      52.391  42.018  71.747  1.00 38.83           C
ATOM 13368  CB  VAL D  78      51.002  42.480  71.899  1.00 36.73           C
ATOM 13370  CG1 VAL D  78      50.881  43.889  71.317  1.00 36.47           C
ATOM 13374  CG2 VAL D  78      50.060  41.533  71.152  1.00 36.98           C
ATOM 13378  C   VAL D  78      53.269  43.132  72.259  1.00 39.68           C
ATOM 13379  O   VAL D  78      53.417  43.313  73.430  1.00 41.11           O
ATOM 13380  N   PHE D  79      53.852  43.887  71.350  1.00 41.21           N
ATOM 13382  CA  PHE D  79      54.922  44.885  71.657  1.00 42.91           C
ATOM 13384  CB  PHE D  79      56.198  44.576  70.873  1.00 44.00           C
ATOM 13387  CG  PHE D  79      56.685  43.209  71.048  1.00 44.41           C
ATOM 13388  CD1 PHE D  79      56.809  42.361  69.986  1.00 44.33           C
ATOM 13390  CE1 PHE D  79      57.312  41.097  70.146  1.00 44.84           C
ATOM 13392  CZ  PHE D  79      57.692  40.655  71.360  1.00 46.86           C
ATOM 13394  CE2 PHE D  79      57.625  41.481  72.428  1.00 47.48           C
ATOM 13396  CD2 PHE D  79      57.110  42.779  72.274  1.00 47.39           C
ATOM 13398  C   PHE D  79      54.451  46.315  71.284  1.00 41.27           C
ATOM 13399  O   PHE D  79      54.445  46.684  70.135  1.00 41.52           O
ATOM 13400  N   PHE D  80      54.052  47.086  72.266  1.00 40.35           N
ATOM 13402  CA  PHE D  80      53.562  48.422  72.037  1.00 39.60           C
ATOM 13404  CB  PHE D  80      52.521  48.721  73.090  1.00 38.21           C
ATOM 13407  CG  PHE D  80      52.216  50.165  73.261  1.00 37.90           C
ATOM 13408  CD1 PHE D  80      51.021  50.680  72.821  1.00 35.78           C
ATOM 13410  CE1 PHE D  80      50.725  51.977  73.032  1.00 34.24           C
ATOM 13412  CZ  PHE D  80      51.553  52.761  73.706  1.00 33.92           C
ATOM 13414  CE2 PHE D  80      52.672  52.283  74.183  1.00 37.81           C
ATOM 13416  CD2 PHE D  80      53.045  50.982  73.964  1.00 37.72           C
ATOM 13418  C   PHE D  80      54.725  49.303  72.235  1.00 41.55           C
ATOM 13419  O   PHE D  80      55.430  49.157  73.215  1.00 42.98           O
ATOM 13420  N   LYS D  81      54.956  50.208  71.309  1.00 42.00           N
ATOM 13422  CA  LYS D  81      56.094  51.126  71.444  1.00 43.52           C
ATOM 13424  CB  LYS D  81      57.243  50.693  70.573  1.00 45.25           C
ATOM 13427  CG  LYS D  81      58.519  51.595  70.732  1.00 48.35           C
ATOM 13430  CD  LYS D  81      59.776  51.198  69.903  1.00 49.70           C
ATOM 13433  CE  LYS D  81      60.773  52.392  69.816  1.00 53.14           C
ATOM 13436  NZ  LYS D  81      62.159  52.008  69.543  1.00 55.94           N
ATOM 13440  C   LYS D  81      55.604  52.514  71.033  1.00 43.91           C
ATOM 13441  O   LYS D  81      54.940  52.640  69.988  1.00 44.59           O
ATOM 13442  N   MET D  82      55.837  53.535  71.861  1.00 44.38           N
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ATOM	13444	CA	MET	D	82	55.448	54.904	71.496	1.00	45.09	C
ATOM	13446	CB	MET	D	82	54.343	55.408	72.393	1.00	44.28	C
ATOM	13449	CG	MET	D	82	54.024	56.895	72.173	1.00	45.85	C
ATOM	13452	SD	MET	D	82	52.329	57.187	72.824	1.00	47.44	S
ATOM	13453	CE	MET	D	82	52.586	57.665	74.489	1.00	46.84	C
ATOM	13457	C	MET	D	82	56.604	55.815	71.643	1.00	47.35	C
ATOM	13458	O	MET	D	82	57.299	55.728	72.615	1.00	47.79	O
ATOM	13459	N	ASN	D	83	56.792	56.728	70.704	1.00	49.56	N
ATOM	13461	CA	ASN	D	83	58.009	57.562	70.660	1.00	52.90	C
ATOM	13463	CB	ASN	D	83	58.447	57.777	69.202	1.00	55.93	C
ATOM	13466	CG	ASN	D	83	58.932	56.492	68.511	1.00	58.70	C
ATOM	13467	OD1	ASN	D	83	59.525	55.600	69.150	1.00	60.92	O
ATOM	13468	ND2	ASN	D	83	58.724	56.428	67.175	1.00	62.10	N
ATOM	13471	C	ASN	D	83	57.828	58.935	71.279	1.00	53.16	C
ATOM	13472	O	ASN	D	83	56.723	59.418	71.428	1.00	50.57	O
ATOM	13473	N	SER	D	84	58.938	59.578	71.592	1.00	56.13	N
ATOM	13475	CA	SER	D	84	58.927	60.981	72.007	1.00	58.85	C
ATOM	13477	CB	SER	D	84	58.743	61.821	70.818	1.00	60.49	C
ATOM	13480	OG	SER	D	84	59.650	61.296	69.902	1.00	66.30	O
ATOM	13482	C	SER	D	84	57.859	61.347	72.991	1.00	57.53	C
ATOM	13483	O	SER	D	84	56.903	62.028	72.657	1.00	57.77	O
ATOM	13484	N	LEU	D	85	58.044	60.895	74.219	1.00	56.64	N
ATOM	13486	CA	LEU	D	85	57.070	61.114	75.227	1.00	55.13	C
ATOM	13488	CB	LEU	D	85	57.161	60.009	76.274	1.00	53.82	C
ATOM	13491	CG	LEU	D	85	56.234	58.846	75.910	1.00	50.98	C
ATOM	13493	CD1	LEU	D	85	56.953	57.991	74.900	1.00	52.48	C
ATOM	13497	CD2	LEU	D	85	55.847	58.046	77.151	1.00	49.77	C
ATOM	13501	C	LEU	D	85	57.320	62.484	75.826	1.00	57.61	C
ATOM	13502	O	LEU	D	85	58.423	62.985	75.802	1.00	60.21	O
ATOM	13503	N	GLN	D	86	56.249	63.093	76.298	1.00	56.61	N
ATOM	13505	CA	GLN	D	86	56.287	64.342	77.012	1.00	58.88	C
ATOM	13507	CB	GLN	D	86	55.661	65.449	76.174	1.00	60.42	C
ATOM	13510	CG	GLN	D	86	56.455	65.786	74.922	1.00	62.18	C
ATOM	13513	CD	GLN	D	86	57.886	66.248	75.220	1.00	64.34	C
ATOM	13514	OE1	GLN	D	86	58.158	66.968	76.214	1.00	62.43	O
ATOM	13515	NE2	GLN	D	86	58.800	65.806	74.377	1.00	62.47	N
ATOM	13518	C	GLN	D	86	55.487	64.077	78.249	1.00	56.98	C
ATOM	13519	O	GLN	D	86	55.039	62.988	78.450	1.00	53.19	O
ATOM	13520	N	SER	D	87	55.323	65.069	79.089	1.00	59.59	N
ATOM	13522	CA	SER	D	87	54.758	64.812	80.381	1.00	59.57	C
ATOM	13524	CB	SER	D	87	55.036	65.975	81.289	1.00	63.01	C
ATOM	13527	OG	SER	D	87	54.389	67.041	80.689	1.00	67.52	O
ATOM	13529	C	SER	D	87	53.258	64.544	80.272	1.00	57.33	C
ATOM	13530	O	SER	D	87	52.767	63.721	81.021	1.00	55.78	O
ATOM	13531	N	ASN	D	88	52.563	65.209	79.329	1.00	58.66	N
ATOM	13533	CA	ASN	D	88	51.256	64.748	78.718	1.00	56.25	C
ATOM	13535	CB	ASN	D	88	51.180	65.170	77.247	1.00	57.45	C
ATOM	13538	CG	ASN	D	88	50.876	66.580	77.067	1.00	62.84	C
ATOM	13539	OD1	ASN	D	88	50.883	67.306	78.041	1.00	74.09	O
ATOM	13540	ND2	ASN	D	88	50.533	67.012	75.831	1.00	63.95	N
ATOM	13543	C	ASN	D	88	51.038	63.237	78.581	1.00	52.90	C
ATOM	13544	O	ASN	D	88	49.916	62.814	78.417	1.00	52.43	O
ATOM	13545	N	ASP	D	89	52.092	62.440	78.501	1.00	51.41	N
ATOM	13547	CA	ASP	D	89	51.949	61.018	78.388	1.00	49.06	C
ATOM	13549	CB	ASP	D	89	52.926	60.536	77.355	1.00	49.14	C
ATOM	13552	CG	ASP	D	89	52.744	61.234	76.046	1.00	51.56	C
ATOM	13553	OD1	ASP	D	89	51.627	61.127	75.481	1.00	51.32	O
ATOM	13554	OD2	ASP	D	89	53.661	61.899	75.486	1.00	54.26	O
ATOM	13555	C	ASP	D	89	52.113	60.193	79.688	1.00	49.01	C
ATOM	13556	O	ASP	D	89	52.119	58.945	79.650	1.00	47.85	O
ATOM	13557	N	THR	D	90	52.206	60.851	80.847	1.00	51.07	N
ATOM	13559	CA	THR	D	90	52.121	60.112	82.141	1.00	49.85	C
ATOM	13561	CB	THR	D	90	52.273	61.030	83.288	1.00	51.99	C
ATOM	13563	OG1	THR	D	90	53.571	61.636	83.183	1.00	57.36	O
ATOM	13565	CG2	THR	D	90	52.303	60.281	84.588	1.00	51.56	C
ATOM	13569	C	THR	D	90	50.773	59.577	82.214	1.00	47.11	C
ATOM	13570	O	THR	D	90	49.808	60.323	81.988	1.00	47.64	O
ATOM	13571	N	ALA	D	91	50.695	58.289	82.502	1.00	45.03	N

ATOM	13573	CA	ALA	D	91	49.405	57.551	82.488	1.00	42.38	C
ATOM	13575	CB	ALA	D	91	48.762	57.590	81.130	1.00	41.09	C
ATOM	13579	C	ALA	D	91	49.640	56.147	82.851	1.00	40.25	C
ATOM	13580	O	ALA	D	91	50.767	55.723	82.869	1.00	41.74	O
ATOM	13581	N	ILE	D	92	48.576	55.431	83.165	1.00	38.65	N
ATOM	13583	CA	ILE	D	92	48.616	53.982	83.189	1.00	36.52	C
ATOM	13585	CB	ILE	D	92	47.692	53.500	84.265	1.00	37.41	C
ATOM	13587	CG1	ILE	D	92	48.318	53.873	85.587	1.00	39.88	C
ATOM	13590	CD1	ILE	D	92	47.426	54.065	86.604	1.00	43.89	C
ATOM	13594	CG2	ILE	D	92	47.526	52.047	84.213	1.00	36.13	C
ATOM	13598	C	ILE	D	92	48.310	53.461	81.803	1.00	33.73	C
ATOM	13599	O	ILE	D	92	47.290	53.775	81.214	1.00	32.00	O
ATOM	13600	N	TYR	D	93	49.248	52.737	81.244	1.00	33.28	N
ATOM	13602	CA	TYR	D	93	49.012	52.153	79.948	1.00	32.94	C
ATOM	13604	CB	TYR	D	93	50.261	52.260	79.101	1.00	32.51	C
ATOM	13607	CG	TYR	D	93	50.564	53.690	78.742	1.00	35.57	C
ATOM	13608	CD1	TYR	D	93	50.996	54.606	79.683	1.00	38.55	C
ATOM	13610	CE1	TYR	D	93	51.271	55.942	79.320	1.00	40.44	C
ATOM	13612	CZ	TYR	D	93	51.095	56.353	78.008	1.00	38.75	C
ATOM	13613	OH	TYR	D	93	51.301	57.632	77.620	1.00	36.83	O
ATOM	13615	CE2	TYR	D	93	50.676	55.468	77.070	1.00	37.22	C
ATOM	13617	CD2	TYR	D	93	50.386	54.151	77.450	1.00	37.91	C
ATOM	13619	C	TYR	D	93	48.527	50.698	80.099	1.00	32.47	C
ATOM	13620	O	TYR	D	93	49.158	49.906	80.771	1.00	33.93	O
ATOM	13621	N	TYR	D	94	47.412	50.374	79.461	1.00	31.81	N
ATOM	13623	CA	TYR	D	94	46.790	49.071	79.509	1.00	31.89	C
ATOM	13625	CB	TYR	D	94	45.316	49.180	79.927	1.00	31.43	C
ATOM	13628	CG	TYR	D	94	45.044	49.623	81.317	1.00	34.26	C
ATOM	13629	CD1	TYR	D	94	44.722	50.933	81.611	1.00	34.32	C
ATOM	13631	CE1	TYR	D	94	44.471	51.333	82.955	1.00	37.87	C
ATOM	13633	CZ	TYR	D	94	44.541	50.406	83.981	1.00	40.08	C
ATOM	13634	OH	TYR	D	94	44.302	50.719	85.322	1.00	44.06	O
ATOM	13636	CE2	TYR	D	94	44.840	49.120	83.681	1.00	39.37	C
ATOM	13638	CD2	TYR	D	94	45.065	48.720	82.362	1.00	37.60	C
ATOM	13640	C	TYR	D	94	46.766	48.458	78.114	1.00	31.19	C
ATOM	13641	O	TYR	D	94	46.595	49.162	77.134	1.00	28.84	O
ATOM	13642	N	CYS	D	95	46.803	47.114	78.094	1.00	32.31	N
ATOM	13644	CA	CYS	D	95	46.343	46.326	76.978	1.00	31.63	C
ATOM	13646	CB	CYS	D	95	47.178	45.367	76.555	1.00	32.86	C
ATOM	13649	SG	CYS	D	95	47.837	44.087	77.682	1.00	36.32	S
ATOM	13650	C	CYS	D	95	45.043	45.595	77.229	1.00	31.81	C
ATOM	13651	O	CYS	D	95	44.543	45.489	78.338	1.00	32.84	O
ATOM	13652	N	ALA	D	96	44.415	45.138	76.170	1.00	31.66	N
ATOM	13654	CA	ALA	D	96	43.065	44.613	76.333	1.00	31.98	C
ATOM	13656	CB	ALA	D	96	42.067	45.738	76.560	1.00	31.73	C
ATOM	13660	C	ALA	D	96	42.610	43.789	75.189	1.00	31.15	C
ATOM	13661	O	ALA	D	96	43.109	43.916	74.113	1.00	30.28	O
ATOM	13662	N	ARG	D	97	41.644	42.929	75.459	1.00	31.57	N
ATOM	13664	CA	ARG	D	97	41.056	42.132	74.424	1.00	31.04	C
ATOM	13666	CB	ARG	D	97	41.403	40.657	74.529	1.00	31.65	C
ATOM	13669	CG	ARG	D	97	41.364	39.961	73.252	1.00	30.26	C
ATOM	13672	CD	ARG	D	97	41.106	38.522	73.380	1.00	33.63	C
ATOM	13675	NE	ARG	D	97	39.673	38.270	73.544	1.00	35.37	N
ATOM	13677	CZ	ARG	D	97	39.119	37.052	73.723	1.00	37.21	C
ATOM	13678	NH1	ARG	D	97	39.855	35.971	73.753	1.00	39.36	N
ATOM	13681	NH2	ARG	D	97	37.797	36.905	73.786	1.00	38.08	N
ATOM	13684	C	ARG	D	97	39.632	42.302	74.578	1.00	30.96	C
ATOM	13685	O	ARG	D	97	39.130	42.243	75.686	1.00	31.79	O
ATOM	13686	N	ALA	D	98	38.981	42.482	73.441	1.00	30.39	N
ATOM	13688	CA	ALA	D	98	37.540	42.481	73.374	1.00	30.35	C
ATOM	13690	CB	ALA	D	98	37.141	42.731	71.958	1.00	30.65	C
ATOM	13694	C	ALA	D	98	36.991	41.140	73.769	1.00	31.90	C
ATOM	13695	O	ALA	D	98	37.675	40.141	73.670	1.00	31.68	O
ATOM	13696	N	LEU	D	99	35.719	41.124	74.134	1.00	33.49	N
ATOM	13698	CA	LEU	D	99	34.995	39.875	74.405	1.00	35.36	C
ATOM	13700	CB	LEU	D	99	33.719	40.195	75.166	1.00	36.53	C
ATOM	13703	CG	LEU	D	99	32.855	39.064	75.632	1.00	37.57	C
ATOM	13705	CD1	LEU	D	99	33.465	38.470	76.786	1.00	39.95	C

ATOM	13709	CD2	LEU	D	99	31.538	39.533	75.980	1.00	38.23	C
ATOM	13713	C	LEU	D	99	34.636	39.123	73.129	1.00	34.97	C
ATOM	13714	O	LEU	D	99	34.376	37.955	73.165	1.00	38.11	O
ATOM	13715	N	THR	D	100	34.604	39.801	72.007	1.00	33.14	N
ATOM	13717	CA	THR	D	100	34.004	39.285	70.772	1.00	32.28	C
ATOM	13719	CB	THR	D	100	32.617	39.874	70.631	1.00	33.08	C
ATOM	13721	OG1	THR	D	100	31.693	39.072	71.380	1.00	32.58	O
ATOM	13723	CG2	THR	D	100	32.098	39.948	69.118	1.00	37.21	C
ATOM	13727	C	THR	D	100	34.873	39.702	69.604	1.00	31.13	C
ATOM	13728	O	THR	D	100	35.471	40.785	69.620	1.00	30.37	O
ATOM	13729	N	TYR	D	101	34.993	38.833	68.611	1.00	31.37	N
ATOM	13731	CA	TYR	D	101	35.703	39.160	67.419	1.00	30.84	C
ATOM	13733	CB	TYR	D	101	35.437	38.137	66.314	1.00	32.08	C
ATOM	13736	CG	TYR	D	101	35.629	36.729	66.805	1.00	34.25	C
ATOM	13737	CD1	TYR	D	101	34.583	35.941	67.097	1.00	38.88	C
ATOM	13739	CE1	TYR	D	101	34.750	34.707	67.562	1.00	39.52	C
ATOM	13741	CZ	TYR	D	101	35.946	34.269	67.763	1.00	38.52	C
ATOM	13742	OH	TYR	D	101	36.095	33.043	68.238	1.00	44.46	O
ATOM	13744	CE2	TYR	D	101	36.986	34.992	67.497	1.00	36.82	C
ATOM	13746	CD2	TYR	D	101	36.835	36.231	67.048	1.00	35.53	C
ATOM	13748	C	TYR	D	101	35.277	40.529	66.932	1.00	30.86	C
ATOM	13749	O	TYR	D	101	34.084	40.893	66.955	1.00	33.11	O
ATOM	13750	N	TYR	D	102	36.280	41.279	66.517	1.00	29.81	N
ATOM	13752	CA	TYR	D	102	36.191	42.562	65.853	1.00	29.45	C
ATOM	13754	CB	TYR	D	102	35.565	42.386	64.481	1.00	30.72	C
ATOM	13757	CG	TYR	D	102	36.154	41.295	63.698	1.00	28.52	C
ATOM	13758	CD1	TYR	D	102	35.328	40.351	63.085	1.00	32.03	C
ATOM	13760	CE1	TYR	D	102	35.834	39.306	62.287	1.00	32.70	C
ATOM	13762	CZ	TYR	D	102	37.178	39.172	62.157	1.00	29.94	C
ATOM	13763	OH	TYR	D	102	37.581	38.164	61.424	1.00	30.00	O
ATOM	13765	CE2	TYR	D	102	38.019	40.076	62.744	1.00	29.21	C
ATOM	13767	CD2	TYR	D	102	37.461	41.196	63.511	1.00	26.98	C
ATOM	13769	C	TYR	D	102	35.564	43.702	66.606	1.00	29.34	C
ATOM	13770	O	TYR	D	102	35.211	44.753	65.993	1.00	31.06	O
ATOM	13771	N	ASP	D	103	35.453	43.560	67.911	1.00	29.51	N
ATOM	13773	CA	ASP	D	103	34.621	44.510	68.693	1.00	31.57	C
ATOM	13775	CB	ASP	D	103	33.523	43.743	69.392	1.00	32.31	C
ATOM	13778	CG	ASP	D	103	32.231	44.541	69.603	1.00	35.50	C
ATOM	13779	OD1	ASP	D	103	32.229	45.811	69.699	1.00	37.86	O
ATOM	13780	OD2	ASP	D	103	31.147	43.932	69.760	1.00	33.03	O
ATOM	13781	C	ASP	D	103	35.453	45.285	69.688	1.00	31.31	C
ATOM	13782	O	ASP	D	103	36.726	45.130	69.654	1.00	30.80	O
ATOM	13783	N	TYR	D	104	34.867	46.062	70.572	1.00	32.47	N
ATOM	13785	CA	TYR	D	104	35.564	47.042	71.419	1.00	33.02	C
ATOM	13787	CB	TYR	D	104	35.387	48.429	70.847	1.00	32.52	C
ATOM	13790	CG	TYR	D	104	35.855	48.529	69.452	1.00	32.49	C
ATOM	13791	CD1	TYR	D	104	35.051	48.168	68.386	1.00	34.38	C
ATOM	13793	CE1	TYR	D	104	35.511	48.235	67.060	1.00	36.47	C
ATOM	13795	CZ	TYR	D	104	36.784	48.661	66.851	1.00	40.26	C
ATOM	13796	OH	TYR	D	104	37.335	48.820	65.555	1.00	42.04	O
ATOM	13798	CE2	TYR	D	104	37.581	48.984	67.959	1.00	36.79	C
ATOM	13800	CD2	TYR	D	104	37.121	48.927	69.194	1.00	32.46	C
ATOM	13802	C	TYR	D	104	35.042	47.079	72.872	1.00	35.19	C
ATOM	13803	O	TYR	D	104	35.119	48.144	73.559	1.00	36.99	O
ATOM	13804	N	GLU	D	105	34.624	45.896	73.331	1.00	35.25	N
ATOM	13806	CA	GLU	D	105	33.892	45.637	74.609	1.00	37.05	C
ATOM	13808	CB	GLU	D	105	32.653	44.759	74.311	1.00	38.39	C
ATOM	13811	CG	GLU	D	105	33.162	43.726	73.210	1.00	39.20	C
ATOM	13814	CD	GLU	D	105	32.119	42.797	72.800	1.00	43.24	C
ATOM	13815	OE1	GLU	D	105	30.967	43.102	73.166	1.00	50.60	O
ATOM	13816	OE2	GLU	D	105	32.424	41.815	72.145	1.00	41.17	O
ATOM	13817	C	GLU	D	105	34.955	44.885	75.449	1.00	34.79	C
ATOM	13818	O	GLU	D	105	35.096	43.674	75.450	1.00	33.21	O
ATOM	13819	N	PHE	D	106	35.794	45.663	76.079	1.00	34.74	N
ATOM	13821	CA	PHE	D	106	36.971	45.106	76.719	1.00	33.56	C
ATOM	13823	CB	PHE	D	106	37.941	46.202	76.907	1.00	32.11	C
ATOM	13826	CG	PHE	D	106	38.218	46.917	75.658	1.00	32.00	C
ATOM	13827	CD1	PHE	D	106	38.095	48.287	75.563	1.00	36.38	C

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ATOM 13829  CE1 PHE D 106      38.440  48.935  74.393  1.00 34.66           C
ATOM 13831  CZ  PHE D 106      38.862  48.191  73.304  1.00 30.31           C
ATOM 13833  CE2 PHE D 106      38.918  46.865  73.389  1.00 29.09           C
ATOM 13835  CD2 PHE D 106      38.605  46.234  74.565  1.00 30.59           C
ATOM 13837  C   PHE D 106      36.657  44.375  78.016  1.00 34.43           C
ATOM 13838  O   PHE D 106      36.441  44.995  79.034  1.00 36.37           O
ATOM 13839  N   ALA D 107      36.649  43.050  77.934  1.00 33.57           N
ATOM 13841  CA  ALA D 107      36.320  42.181  79.035  1.00 35.28           C
ATOM 13843  CB  ALA D 107      35.614  40.888  78.539  1.00 35.86           C
ATOM 13847  C   ALA D 107      37.554  41.780  79.759  1.00 35.97           C
ATOM 13848  O   ALA D 107      37.409  41.351  80.903  1.00 38.66           O
ATOM 13849  N   TYR D 108      38.716  41.898  79.101  1.00 33.76           N
ATOM 13851  CA  TYR D 108      39.993  41.378  79.567  1.00 34.96           C
ATOM 13853  CB  TYR D 108      40.460  40.163  78.709  1.00 34.47           C
ATOM 13856  CG  TYR D 108      39.440  39.099  78.601  1.00 35.04           C
ATOM 13857  CD1 TYR D 108      38.726  38.850  77.407  1.00 35.31           C
ATOM 13859  CE1 TYR D 108      37.743  37.862  77.365  1.00 35.79           C
ATOM 13861  CZ  TYR D 108      37.474  37.182  78.535  1.00 38.03           C
ATOM 13862  OH  TYR D 108      36.533  36.206  78.654  1.00 44.30           O
ATOM 13864  CE2 TYR D 108      38.152  37.435  79.680  1.00 38.12           C
ATOM 13866  CD2 TYR D 108      39.139  38.355  79.697  1.00 37.41           C
ATOM 13868  C   TYR D 108      41.038  42.466  79.377  1.00 34.37           C
ATOM 13869  O   TYR D 108      41.156  42.969  78.276  1.00 33.58           O
ATOM 13870  N   TRP D 109      41.817  42.778  80.431  1.00 35.51           N
ATOM 13872  CA  TRP D 109      42.755  43.898  80.499  1.00 33.04           C
ATOM 13874  CB  TRP D 109      42.188  45.019  81.373  1.00 33.12           C
ATOM 13877  CG  TRP D 109      40.965  45.716  80.852  1.00 33.03           C
ATOM 13878  CD1 TRP D 109      39.735  45.182  80.686  1.00 35.04           C
ATOM 13880  NE1 TRP D 109      38.877  46.105  80.136  1.00 35.58           N
ATOM 13882  CE2 TRP D 109      39.559  47.266  79.932  1.00 33.94           C
ATOM 13883  CD2 TRP D 109      40.878  47.049  80.343  1.00 33.28           C
ATOM 13884  CE3 TRP D 109      41.789  48.075  80.166  1.00 33.80           C
ATOM 13886  CZ3 TRP D 109      41.349  49.277  79.611  1.00 33.42           C
ATOM 13888  CH2 TRP D 109      40.051  49.447  79.228  1.00 33.69           C
ATOM 13890  CZ2 TRP D 109      39.129  48.465  79.401  1.00 33.31           C
ATOM 13892  C   TRP D 109      43.970  43.405  81.176  1.00 34.87           C
ATOM 13893  O   TRP D 109      43.919  42.614  82.081  1.00 37.35           O
ATOM 13894  N   GLY D 110      45.108  43.904  80.769  1.00 35.09           N
ATOM 13896  CA  GLY D 110      46.304  43.773  81.543  1.00 35.48           C
ATOM 13899  C   GLY D 110      46.167  44.509  82.858  1.00 36.71           C
ATOM 13900  O   GLY D 110      45.170  45.206  83.165  1.00 35.65           O
ATOM 13901  N   GLN D 111      47.194  44.292  83.674  1.00 38.41           N
ATOM 13903  CA  GLN D 111      47.290  44.909  84.986  1.00 39.88           C
ATOM 13905  CB  GLN D 111      48.241  44.104  85.886  1.00 42.53           C
ATOM 13908  CG  GLN D 111      49.725  44.447  85.776  1.00 42.86           C
ATOM 13911  CD  GLN D 111      50.463  43.616  84.777  1.00 41.89           C
ATOM 13912  OE1 GLN D 111      51.637  43.438  84.917  1.00 44.32           O
ATOM 13913  NE2 GLN D 111      49.790  43.179  83.713  1.00 41.71           N
ATOM 13916  C   GLN D 111      47.694  46.381  84.902  1.00 38.77           C
ATOM 13917  O   GLN D 111      47.649  47.095  85.877  1.00 40.58           O
ATOM 13918  N   GLY D 112      48.078  46.845  83.738  1.00 36.79           N
ATOM 13920  CA  GLY D 112      48.429  48.224  83.606  1.00 37.21           C
ATOM 13923  C   GLY D 112      49.899  48.474  83.858  1.00 39.24           C
ATOM 13924  O   GLY D 112      50.520  47.788  84.674  1.00 42.52           O
ATOM 13925  N   THR D 113      50.463  49.436  83.139  1.00 38.68           N
ATOM 13927  CA  THR D 113      51.785  49.879  83.417  1.00 41.03           C
ATOM 13929  CB  THR D 113      52.612  49.719  82.180  1.00 40.97           C
ATOM 13931  OG1 THR D 113      52.785  48.325  81.891  1.00 40.85           O
ATOM 13933  CG2 THR D 113      54.036  50.254  82.416  1.00 42.53           C
ATOM 13937  C   THR D 113      51.750  51.353  83.870  1.00 42.14           C
ATOM 13938  O   THR D 113      51.250  52.198  83.134  1.00 40.31           O
ATOM 13939  N   LEU D 114      52.270  51.637  85.076  1.00 44.50           N
ATOM 13941  CA  LEU D 114      52.295  52.984  85.606  1.00 45.15           C
ATOM 13943  CB  LEU D 114      52.560  52.927  87.087  1.00 47.24           C
ATOM 13946  CG  LEU D 114      52.578  54.312  87.753  1.00 48.79           C
ATOM 13948  CD1 LEU D 114      51.232  54.921  87.733  1.00 49.87           C
ATOM 13952  CD2 LEU D 114      53.087  54.296  89.213  1.00 51.70           C
ATOM 13956  C   LEU D 114      53.444  53.717  84.956  1.00 46.43           C
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ATOM	13957	O	LEU	D	114	54.584	53.494	85.359	1.00 48.45	O
ATOM	13958	N	VAL	D	115	53.174	54.617	84.008	1.00 44.80	N
ATOM	13960	CA	VAL	D	115	54.248	55.285	83.274	1.00 45.32	C
ATOM	13962	CB	VAL	D	115	53.999	55.303	81.781	1.00 43.97	C
ATOM	13964	CG1	VAL	D	115	55.038	56.092	81.076	1.00 45.37	C
ATOM	13968	CG2	VAL	D	115	54.011	53.915	81.240	1.00 45.06	C
ATOM	13972	C	VAL	D	115	54.332	56.717	83.635	1.00 46.21	C
ATOM	13973	O	VAL	D	115	53.342	57.421	83.507	1.00 46.25	O
ATOM	13974	N	THR	D	116	55.549	57.149	83.931	1.00 47.39	N
ATOM	13976	CA	THR	D	116	55.876	58.442	84.504	1.00 49.19	C
ATOM	13978	CB	THR	D	116	56.559	58.139	85.826	1.00 51.28	C
ATOM	13980	OG1	THR	D	116	55.851	57.040	86.446	1.00 49.66	O
ATOM	13982	CG2	THR	D	116	56.561	59.345	86.814	1.00 52.90	C
ATOM	13986	C	THR	D	116	56.870	59.154	83.611	1.00 50.16	C
ATOM	13987	O	THR	D	116	57.880	58.600	83.330	1.00 50.46	O
ATOM	13988	N	VAL	D	117	56.626	60.382	83.209	1.00 50.68	N
ATOM	13990	CA	VAL	D	117	57.511	61.021	82.292	1.00 52.90	C
ATOM	13992	CB	VAL	D	117	56.786	61.424	81.067	1.00 52.02	C
ATOM	13994	CG1	VAL	D	117	57.669	62.056	80.124	1.00 54.34	C
ATOM	13998	CG2	VAL	D	117	56.235	60.219	80.389	1.00 51.45	C
ATOM	14002	C	VAL	D	117	58.169	62.215	82.941	1.00 57.15	C
ATOM	14003	O	VAL	D	117	57.575	63.264	83.139	1.00 59.15	O
ATOM	14004	N	SER	D	118	59.443	62.064	83.257	1.00 59.82	N
ATOM	14006	CA	SER	D	118	60.162	63.096	83.950	1.00 63.47	C
ATOM	14008	CB	SER	D	118	59.855	62.996	85.452	1.00 63.79	C
ATOM	14011	OG	SER	D	118	60.736	63.764	86.268	1.00 66.67	O
ATOM	14013	C	SER	D	118	61.614	62.834	83.640	1.00 66.29	C
ATOM	14014	O	SER	D	118	62.005	61.685	83.390	1.00 64.91	O
ATOM	14015	N	ALA	D	119	62.406	63.899	83.602	1.00 54.31	N
ATOM	14017	CA	ALA	D	119	63.822	63.741	83.347	1.00 55.75	C
ATOM	14019	CB	ALA	D	119	64.349	64.894	82.555	1.00 57.76	C
ATOM	14023	C	ALA	D	119	64.549	63.610	84.672	1.00 55.45	C
ATOM	14024	O	ALA	D	119	65.775	63.529	84.729	1.00 56.97	O
ATOM	14025	N	ALA	D	120	63.807	63.582	85.753	1.00 53.85	N
ATOM	14027	CA	ALA	D	120	64.453	63.464	87.038	1.00 53.86	C
ATOM	14029	CB	ALA	D	120	63.469	63.824	88.155	1.00 53.59	C
ATOM	14033	C	ALA	D	120	64.930	62.055	87.236	1.00 53.49	C
ATOM	14034	O	ALA	D	120	64.510	61.091	86.561	1.00 52.47	O
ATOM	14035	N	SER	D	121	65.770	61.966	88.241	1.00 54.49	N
ATOM	14037	CA	SER	D	121	66.487	60.753	88.607	1.00 55.63	C
ATOM	14039	CB	SER	D	121	67.839	61.096	89.074	1.00 58.28	C
ATOM	14042	OG	SER	D	121	67.715	61.672	90.340	1.00 57.66	O
ATOM	14044	C	SER	D	121	65.723	60.084	89.756	1.00 54.50	C
ATOM	14045	O	SER	D	121	65.234	60.737	90.667	1.00 54.17	O
ATOM	14046	N	THR	D	122	65.671	58.761	89.676	1.00 54.53	N
ATOM	14048	CA	THR	D	122	65.177	57.902	90.720	1.00 53.23	C
ATOM	14050	CB	THR	D	122	65.387	56.504	90.241	1.00 54.78	C
ATOM	14052	OG1	THR	D	122	64.463	56.273	89.190	1.00 52.62	O
ATOM	14054	CG2	THR	D	122	65.040	55.501	91.265	1.00 55.87	C
ATOM	14058	C	THR	D	122	65.900	58.103	92.036	1.00 54.14	C
ATOM	14059	O	THR	D	122	67.082	58.370	92.070	1.00 57.74	O
ATOM	14060	N	LYS	D	123	65.155	57.970	93.101	1.00 52.70	N
ATOM	14062	CA	LYS	D	123	65.617	58.079	94.434	1.00 54.77	C
ATOM	14064	CB	LYS	D	123	65.602	59.545	94.866	1.00 55.21	C
ATOM	14067	CG	LYS	D	123	65.630	59.764	96.421	1.00 58.84	C
ATOM	14070	CD	LYS	D	123	66.294	61.098	96.875	1.00 62.89	C
ATOM	14073	CE	LYS	D	123	66.371	61.121	98.457	1.00 68.82	C
ATOM	14076	NZ	LYS	D	123	67.102	62.300	99.097	1.00 74.24	N
ATOM	14080	C	LYS	D	123	64.761	57.241	95.373	1.00 54.21	C
ATOM	14081	O	LYS	D	123	63.536	57.235	95.342	1.00 52.84	O
ATOM	14082	N	GLY	D	124	65.417	56.518	96.234	1.00 57.38	N
ATOM	14084	CA	GLY	D	124	64.733	55.809	97.291	1.00 58.45	C
ATOM	14087	C	GLY	D	124	64.316	56.758	98.400	1.00 58.43	C
ATOM	14088	O	GLY	D	124	64.894	57.864	98.560	1.00 58.61	O
ATOM	14089	N	PRO	D	125	63.310	56.315	99.155	1.00 58.47	N
ATOM	14090	CA	PRO	D	125	62.713	57.103	100.230	1.00 58.38	C
ATOM	14092	CB	PRO	D	125	61.436	56.350	100.539	1.00 57.92	C
ATOM	14095	CG	PRO	D	125	61.782	54.878	100.208	1.00 59.26	C

ATOM	14098	CD	PRO	D	125	62.690	54.979	99.035	1.00	59.00	C
ATOM	14101	C	PRO	D	125	63.552	57.038	101.469	1.00	62.83	C
ATOM	14102	O	PRO	D	125	64.321	56.073	101.644	1.00	64.70	O
ATOM	14103	N	SER	D	126	63.389	58.069	102.297	1.00	63.66	N
ATOM	14105	CA	SER	D	126	63.821	58.051	103.670	1.00	68.27	C
ATOM	14107	CB	SER	D	126	64.670	59.277	104.016	1.00	71.00	C
ATOM	14110	OG	SER	D	126	63.979	60.445	103.680	1.00	70.40	O
ATOM	14112	C	SER	D	126	62.520	57.927	104.480	1.00	67.10	C
ATOM	14113	O	SER	D	126	61.438	58.220	103.960	1.00	63.05	O
ATOM	14114	N	VAL	D	127	62.644	57.394	105.709	1.00	70.81	N
ATOM	14116	CA	VAL	D	127	61.531	56.782	106.473	1.00	70.08	C
ATOM	14118	CB	VAL	D	127	61.577	55.231	106.423	1.00	71.07	C
ATOM	14120	CG1	VAL	D	127	60.469	54.669	107.223	1.00	72.19	C
ATOM	14124	CG2	VAL	D	127	61.482	54.719	105.003	1.00	66.98	C
ATOM	14128	C	VAL	D	127	61.614	57.164	107.935	1.00	73.31	C
ATOM	14129	O	VAL	D	127	62.406	56.660	108.598	1.00	76.86	O
ATOM	14130	N	PHE	D	128	60.795	58.080	108.402	1.00	72.76	N
ATOM	14132	CA	PHE	D	128	60.755	58.481	109.789	1.00	77.52	C
ATOM	14134	CB	PHE	D	128	60.660	60.012	109.858	1.00	77.44	C
ATOM	14137	CG	PHE	D	128	61.762	60.709	109.068	1.00	78.35	C
ATOM	14138	CD1	PHE	D	128	61.473	61.588	108.023	1.00	74.99	C
ATOM	14140	CE1	PHE	D	128	62.471	62.155	107.297	1.00	73.17	C
ATOM	14142	CZ	PHE	D	128	63.765	61.868	107.582	1.00	77.82	C
ATOM	14144	CE2	PHE	D	128	64.074	61.016	108.582	1.00	80.68	C
ATOM	14146	CD2	PHE	D	128	63.089	60.430	109.318	1.00	80.90	C
ATOM	14148	C	PHE	D	128	59.576	57.790	110.461	1.00	78.03	C
ATOM	14149	O	PHE	D	128	58.667	57.365	109.780	1.00	74.02	O
ATOM	14150	N	PRO	D	129	59.604	57.611	111.781	1.00	84.09	N
ATOM	14151	CA	PRO	D	129	58.457	57.042	112.494	1.00	85.22	C
ATOM	14153	CB	PRO	D	129	59.078	56.527	113.776	1.00	91.56	C
ATOM	14156	CG	PRO	D	129	60.132	57.546	114.071	1.00	94.86	C
ATOM	14159	CD	PRO	D	129	60.703	57.940	112.717	1.00	90.22	C
ATOM	14162	C	PRO	D	129	57.522	58.179	112.818	1.00	85.06	C
ATOM	14163	O	PRO	D	129	57.900	59.302	112.572	1.00	85.76	O
ATOM	14164	N	LEU	D	130	56.343	57.890	113.342	1.00	85.59	N
ATOM	14166	CA	LEU	D	130	55.394	58.881	113.824	1.00	85.82	C
ATOM	14168	CB	LEU	D	130	54.239	59.068	112.847	1.00	80.81	C
ATOM	14171	CG	LEU	D	130	54.384	59.615	111.434	1.00	76.34	C
ATOM	14173	CD1	LEU	D	130	53.028	59.517	110.732	1.00	73.31	C
ATOM	14177	CD2	LEU	D	130	54.855	61.068	111.414	1.00	77.79	C
ATOM	14181	C	LEU	D	130	54.860	58.224	115.070	1.00	90.47	C
ATOM	14182	O	LEU	D	130	53.815	57.574	115.037	1.00	89.75	O
ATOM	14183	N	ALA	D	131	55.601	58.344	116.162	1.00	96.32	N
ATOM	14185	CA	ALA	D	131	55.347	57.554	117.353	1.00	101.04	C
ATOM	14187	CB	ALA	D	131	56.545	57.608	118.237	1.00	107.25	C
ATOM	14191	C	ALA	D	131	54.118	58.036	118.109	1.00	102.96	C
ATOM	14192	O	ALA	D	131	53.813	59.224	118.068	1.00	101.97	O
ATOM	14193	N	PRO	D	132	53.447	57.125	118.830	1.00	106.22	N
ATOM	14194	CA	PRO	D	132	52.215	57.439	119.582	1.00	108.61	C
ATOM	14196	CB	PRO	D	132	51.637	56.027	119.870	1.00	109.88	C
ATOM	14199	CG	PRO	D	132	52.854	55.128	120.013	1.00	111.73	C
ATOM	14202	CD	PRO	D	132	53.831	55.703	119.007	1.00	108.34	C
ATOM	14205	C	PRO	D	132	52.484	58.180	120.916	1.00	115.60	C
ATOM	14206	O	PRO	D	132	51.947	57.773	121.972	1.00	120.74	O
ATOM	14207	N	SER	D	133	53.261	59.267	120.859	1.00	116.62	N
ATOM	14209	CA	SER	D	133	54.103	59.666	122.000	1.00	124.00	C
ATOM	14211	CB	SER	D	133	55.207	60.712	121.636	1.00	124.54	C
ATOM	14214	OG	SER	D	133	54.848	61.677	120.645	1.00	118.70	O
ATOM	14216	C	SER	D	133	53.234	60.103	123.172	1.00	129.46	C
ATOM	14217	O	SER	D	133	52.147	60.677	122.931	1.00	127.35	O
ATOM	14218	N	SER	D	134	53.726	59.793	124.396	1.00	136.79	N
ATOM	14220	CA	SER	D	134	52.982	59.796	125.685	1.00	143.02	C
ATOM	14222	CB	SER	D	134	53.599	60.774	126.704	1.00	150.95	C
ATOM	14225	OG	SER	D	134	53.463	62.111	126.259	1.00	149.72	O
ATOM	14227	C	SER	D	134	51.470	60.022	125.546	1.00	140.00	C
ATOM	14228	O	SER	D	134	50.863	60.833	126.267	1.00	144.16	O
ATOM	14229	N	LYS	D	135	50.881	59.254	124.626	1.00	133.42	N
ATOM	14231	CA	LYS	D	135	49.472	59.353	124.290	1.00	130.16	C

ATOM	14233	CB	LYS	D	135	49.180	58.611	122.963	1.00122.30	C
ATOM	14240	C	LYS	D	135	48.725	58.746	125.472	1.00135.96	C
ATOM	14241	O	LYS	D	135	48.452	57.551	125.475	1.00135.99	O
ATOM	14242	N	SER	D	136	48.443	59.541	126.506	1.00141.90	N
ATOM	14244	CA	SER	D	136	47.762	58.997	127.683	1.00148.08	C
ATOM	14246	CB	SER	D	136	48.003	59.872	128.938	1.00156.17	C
ATOM	14249	OG	SER	D	136	47.204	59.449	130.043	1.00160.68	O
ATOM	14251	C	SER	D	136	46.252	58.781	127.358	1.00145.76	C
ATOM	14252	O	SER	D	136	45.478	59.749	127.277	1.00145.97	O
ATOM	14253	N	THR	D	137	45.887	57.508	127.105	1.00143.97	N
ATOM	14255	CA	THR	D	137	44.495	57.012	126.990	1.00142.86	C
ATOM	14257	CB	THR	D	137	43.968	56.999	125.484	1.00134.89	C
ATOM	14259	OG1	THR	D	137	44.846	57.734	124.605	1.00129.83	O
ATOM	14261	CG2	THR	D	137	42.567	57.671	125.358	1.00134.26	C
ATOM	14265	C	THR	D	137	44.440	55.570	127.549	1.00146.23	C
ATOM	14266	O	THR	D	137	44.505	54.608	126.769	1.00142.87	O
ATOM	14267	N	SER	D	138	44.364	55.417	128.874	1.00153.23	N
ATOM	14269	CA	SER	D	138	44.243	54.088	129.508	1.00157.67	C
ATOM	14271	CB	SER	D	138	43.834	54.215	131.017	1.00166.65	C
ATOM	14274	OG	SER	D	138	42.567	53.646	131.354	1.00167.36	O
ATOM	14276	C	SER	D	138	43.278	53.162	128.739	1.00154.58	C
ATOM	14277	O	SER	D	138	43.711	52.177	128.126	1.00151.95	O
ATOM	14278	N	GLY	D	139	41.984	53.513	128.758	1.00155.39	N
ATOM	14280	CA	GLY	D	139	40.916	52.737	128.132	1.00153.62	C
ATOM	14283	C	GLY	D	139	40.310	53.374	126.872	1.00147.16	C
ATOM	14284	O	GLY	D	139	39.078	53.540	126.851	1.00148.77	O
ATOM	14285	N	GLY	D	140	41.159	53.757	125.887	1.00140.58	N
ATOM	14287	CA	GLY	D	140	40.785	54.070	124.501	1.00133.65	C
ATOM	14290	C	GLY	D	140	41.900	53.685	123.488	1.00128.29	C
ATOM	14291	O	GLY	D	140	43.034	53.341	123.877	1.00129.62	O
ATOM	14292	N	THR	D	141	41.622	53.770	122.181	1.00122.35	N
ATOM	14294	CA	THR	D	141	42.543	53.206	121.174	1.00117.27	C
ATOM	14296	CB	THR	D	141	41.749	52.518	120.026	1.00114.37	C
ATOM	14298	OG1	THR	D	141	41.283	51.237	120.468	1.00118.95	O
ATOM	14300	CG2	THR	D	141	42.640	52.107	118.885	1.00110.43	C
ATOM	14304	C	THR	D	141	43.460	54.289	120.658	1.00112.42	C
ATOM	14305	O	THR	D	141	43.007	55.385	120.437	1.00110.84	O
ATOM	14306	N	ALA	D	142	44.744	53.980	120.495	1.00110.72	N
ATOM	14308	CA	ALA	D	142	45.741	54.969	120.088	1.00107.63	C
ATOM	14310	CB	ALA	D	142	46.854	55.047	121.088	1.00111.82	C
ATOM	14314	C	ALA	D	142	46.308	54.630	118.726	1.00102.27	C
ATOM	14315	O	ALA	D	142	46.122	53.503	118.238	1.00101.65	O
ATOM	14316	N	ALA	D	143	47.020	55.610	118.149	1.00 98.80	N
ATOM	14318	CA	ALA	D	143	47.476	55.602	116.748	1.00 93.39	C
ATOM	14320	CB	ALA	D	143	46.600	56.585	115.878	1.00 89.96	C
ATOM	14324	C	ALA	D	143	48.970	55.943	116.551	1.00 92.18	C
ATOM	14325	O	ALA	D	143	49.568	56.769	117.278	1.00 93.80	O
ATOM	14326	N	LEU	D	144	49.547	55.316	115.529	1.00 88.87	N
ATOM	14328	CA	LEU	D	144	50.950	55.507	115.213	1.00 88.48	C
ATOM	14330	CB	LEU	D	144	51.793	54.604	116.101	1.00 93.10	C
ATOM	14333	CG	LEU	D	144	51.319	53.166	116.222	1.00 94.60	C
ATOM	14335	CD1	LEU	D	144	51.776	52.328	115.026	1.00 91.71	C
ATOM	14339	CD2	LEU	D	144	51.849	52.610	117.557	1.00101.82	C
ATOM	14343	C	LEU	D	144	51.243	55.237	113.737	1.00 84.16	C
ATOM	14344	O	LEU	D	144	50.331	54.826	112.998	1.00 81.75	O
ATOM	14345	N	GLY	D	145	52.504	55.438	113.316	1.00 83.52	N
ATOM	14347	CA	GLY	D	145	52.856	55.270	111.913	1.00 79.91	C
ATOM	14350	C	GLY	D	145	54.282	55.538	111.367	1.00 79.57	C
ATOM	14351	O	GLY	D	145	55.304	55.437	112.066	1.00 83.32	O
ATOM	14352	N	CYS	D	146	54.312	55.893	110.075	1.00 75.22	N
ATOM	14354	CA	CYS	D	146	55.508	55.855	109.206	1.00 73.84	C
ATOM	14356	CB	CYS	D	146	55.664	54.503	108.451	1.00 73.43	C
ATOM	14359	SG	CYS	D	146	56.308	53.216	109.520	1.00 81.52	S
ATOM	14360	C	CYS	D	146	55.384	56.912	108.144	1.00 69.05	C
ATOM	14361	O	CYS	D	146	54.402	56.950	107.391	1.00 65.38	O
ATOM	14362	N	LEU	D	147	56.406	57.747	108.065	1.00 68.91	N
ATOM	14364	CA	LEU	D	147	56.432	58.804	107.109	1.00 65.13	C
ATOM	14366	CB	LEU	D	147	56.963	60.025	107.764	1.00 67.65	C

ATOM	14369	CG	LEU	D	147	57.069	61.227	106.873	1.00 67.06	C
ATOM	14371	CD1	LEU	D	147	55.724	61.483	106.297	1.00 65.61	C
ATOM	14375	CD2	LEU	D	147	57.559	62.440	107.688	1.00 71.20	C
ATOM	14379	C	LEU	D	147	57.370	58.331	106.083	1.00 63.16	C
ATOM	14380	O	LEU	D	147	58.552	58.304	106.328	1.00 64.33	O
ATOM	14381	N	VAL	D	148	56.830	57.899	104.943	1.00 60.56	N
ATOM	14383	CA	VAL	D	148	57.671	57.588	103.762	1.00 59.44	C
ATOM	14385	CB	VAL	D	148	57.170	56.371	103.022	1.00 57.55	C
ATOM	14387	CG1	VAL	D	148	58.149	56.036	101.950	1.00 56.88	C
ATOM	14391	CG2	VAL	D	148	57.071	55.207	103.985	1.00 60.14	C
ATOM	14395	C	VAL	D	148	57.880	58.789	102.783	1.00 57.27	C
ATOM	14396	O	VAL	D	148	56.988	59.143	102.012	1.00 56.19	O
ATOM	14397	N	LYS	D	149	59.063	59.372	102.818	1.00 57.66	N
ATOM	14399	CA	LYS	D	149	59.293	60.687	102.272	1.00 56.80	C
ATOM	14401	CB	LYS	D	149	59.604	61.579	103.479	1.00 60.19	C
ATOM	14404	CG	LYS	D	149	60.038	63.016	103.218	1.00 62.14	C
ATOM	14407	CD	LYS	D	149	59.519	63.986	104.319	1.00 64.95	C
ATOM	14410	CE	LYS	D	149	59.517	65.451	103.856	1.00 66.61	C
ATOM	14413	NZ	LYS	D	149	60.933	65.996	103.508	1.00 69.35	N
ATOM	14417	C	LYS	D	149	60.435	60.715	101.246	1.00 56.13	C
ATOM	14418	O	LYS	D	149	61.365	59.926	101.268	1.00 58.22	O
ATOM	14419	N	ASP	D	150	60.363	61.652	100.340	1.00 54.55	N
ATOM	14421	CA	ASP	D	150	61.444	61.929	99.384	1.00 54.34	C
ATOM	14423	CB	ASP	D	150	62.629	62.585	100.090	1.00 58.17	C
ATOM	14426	CG	ASP	D	150	62.264	63.912	100.695	1.00 60.09	C
ATOM	14427	OD1	ASP	D	150	62.982	64.376	101.590	1.00 69.14	O
ATOM	14428	OD2	ASP	D	150	61.267	64.570	100.383	1.00 58.91	O
ATOM	14429	C	ASP	D	150	61.896	60.772	98.527	1.00 52.77	C
ATOM	14430	O	ASP	D	150	63.026	60.348	98.599	1.00 54.66	O
ATOM	14431	N	TYR	D	151	60.981	60.295	97.682	1.00 50.75	N
ATOM	14433	CA	TYR	D	151	61.252	59.228	96.706	1.00 49.16	C
ATOM	14435	CB	TYR	D	151	60.723	57.880	97.179	1.00 49.80	C
ATOM	14438	CG	TYR	D	151	59.222	57.790	97.252	1.00 48.09	C
ATOM	14439	CD1	TYR	D	151	58.483	57.376	96.154	1.00 46.12	C
ATOM	14441	CE1	TYR	D	151	57.135	57.321	96.171	1.00 45.49	C
ATOM	14443	CZ	TYR	D	151	56.438	57.658	97.307	1.00 45.19	C
ATOM	14444	OH	TYR	D	151	55.092	57.521	97.328	1.00 43.36	O
ATOM	14446	CE2	TYR	D	151	57.101	58.077	98.410	1.00 49.83	C
ATOM	14449	CD2	TYR	D	151	58.549	58.130	98.391	1.00 49.84	C
ATOM	14450	C	TYR	D	151	60.657	59.567	95.382	1.00 46.65	C
ATOM	14451	O	TYR	D	151	59.792	60.426	95.271	1.00 44.77	O
ATOM	14452	N	PHE	D	152	61.155	58.867	94.379	1.00 46.98	N
ATOM	14454	CA	PHE	D	152	60.724	59.046	93.020	1.00 46.06	C
ATOM	14456	CB	PHE	D	152	61.221	60.378	92.532	1.00 46.70	C
ATOM	14459	CG	PHE	D	152	60.649	60.766	91.240	1.00 46.30	C
ATOM	14460	CD1	PHE	D	152	61.258	60.423	90.090	1.00 47.89	C
ATOM	14462	CE1	PHE	D	152	60.726	60.772	88.909	1.00 47.13	C
ATOM	14464	CZ	PHE	D	152	59.636	61.473	88.857	1.00 43.58	C
ATOM	14466	CE2	PHE	D	152	59.024	61.811	89.990	1.00 45.67	C
ATOM	14468	CD2	PHE	D	152	59.510	61.472	91.174	1.00 44.91	C
ATOM	14470	C	PHE	D	152	61.265	57.933	92.107	1.00 47.13	C
ATOM	14471	O	PHE	D	152	62.368	57.460	92.281	1.00 46.91	O
ATOM	14472	N	PRO	D	153	60.458	57.446	91.172	1.00 47.74	N
ATOM	14473	CA	PRO	D	153	59.064	57.821	91.009	1.00 46.84	C
ATOM	14475	CB	PRO	D	153	58.855	57.629	89.519	1.00 47.99	C
ATOM	14478	CG	PRO	D	153	59.782	56.422	89.160	1.00 49.21	C
ATOM	14481	CD	PRO	D	153	60.823	56.380	90.221	1.00 49.16	C
ATOM	14484	C	PRO	D	153	58.259	56.813	91.759	1.00 46.89	C
ATOM	14485	O	PRO	D	153	58.853	56.011	92.434	1.00 46.53	O
ATOM	14486	N	GLU	D	154	56.945	56.877	91.635	1.00 47.75	N
ATOM	14488	CA	GLU	D	154	56.045	55.904	92.262	1.00 49.53	C
ATOM	14490	CB	GLU	D	154	54.615	56.391	92.071	1.00 49.61	C
ATOM	14493	CG	GLU	D	154	54.229	57.558	92.949	1.00 48.55	C
ATOM	14496	CD	GLU	D	154	53.234	57.082	94.005	1.00 51.59	C
ATOM	14497	OE1	GLU	D	154	53.672	56.795	95.160	1.00 50.24	O
ATOM	14498	OE2	GLU	D	154	52.016	56.961	93.650	1.00 52.02	O
ATOM	14499	C	GLU	D	154	56.182	54.533	91.593	1.00 51.99	C
ATOM	14500	O	GLU	D	154	56.757	54.438	90.491	1.00 52.94	O

ATOM	14501	N	PRO	D	155	55.706	53.469	92.229	1.00	54.47	N
ATOM	14502	CA	PRO	D	155	55.067	53.470	93.560	1.00	55.09	C
ATOM	14504	CB	PRO	D	155	53.979	52.480	93.367	1.00	56.62	C
ATOM	14507	CG	PRO	D	155	54.662	51.449	92.460	1.00	58.94	C
ATOM	14510	CD	PRO	D	155	55.738	52.112	91.677	1.00	57.37	C
ATOM	14513	C	PRO	D	155	55.902	52.909	94.714	1.00	56.44	C
ATOM	14514	O	PRO	D	155	56.987	52.293	94.496	1.00	57.94	O
ATOM	14515	N	VAL	D	156	55.356	53.104	95.921	1.00	55.95	N
ATOM	14517	CA	VAL	D	156	55.900	52.510	97.110	1.00	58.09	C
ATOM	14519	CB	VAL	D	156	56.074	53.534	98.199	1.00	57.30	C
ATOM	14521	CG1	VAL	D	156	56.640	52.887	99.512	1.00	60.92	C
ATOM	14525	CG2	VAL	D	156	57.072	54.513	97.769	1.00	57.85	C
ATOM	14529	C	VAL	D	156	54.907	51.505	97.595	1.00	60.29	C
ATOM	14530	O	VAL	D	156	53.748	51.612	97.316	1.00	61.45	O
ATOM	14531	N	THR	D	157	55.373	50.518	98.313	1.00	62.28	N
ATOM	14533	CA	THR	D	157	54.531	49.596	98.993	1.00	64.84	C
ATOM	14535	CB	THR	D	157	55.070	48.221	98.666	1.00	68.70	C
ATOM	14537	OG1	THR	D	157	54.767	47.907	97.300	1.00	68.61	O
ATOM	14539	CG2	THR	D	157	54.377	47.166	99.467	1.00	74.43	C
ATOM	14543	C	THR	D	157	54.791	49.880	100.432	1.00	65.43	C
ATOM	14544	O	THR	D	157	55.929	50.121	100.772	1.00	67.18	O
ATOM	14545	N	VAL	D	158	53.792	49.826	101.297	1.00	66.13	N
ATOM	14547	CA	VAL	D	158	54.027	49.793	102.753	1.00	67.84	C
ATOM	14549	CB	VAL	D	158	53.496	51.066	103.435	1.00	65.69	C
ATOM	14551	CG1	VAL	D	158	53.812	51.053	104.905	1.00	67.82	C
ATOM	14555	CG2	VAL	D	158	54.053	52.331	102.774	1.00	61.61	C
ATOM	14559	C	VAL	D	158	53.277	48.599	103.351	1.00	72.19	C
ATOM	14560	O	VAL	D	158	52.314	48.156	102.776	1.00	73.95	O
ATOM	14561	N	SER	D	159	53.681	48.090	104.507	1.00	75.68	N
ATOM	14563	CA	SER	D	159	52.984	46.954	105.155	1.00	80.05	C
ATOM	14565	CB	SER	D	159	53.231	45.659	104.387	1.00	83.26	C
ATOM	14568	OG	SER	D	159	54.603	45.300	104.525	1.00	84.89	O
ATOM	14570	C	SER	D	159	53.544	46.773	106.546	1.00	83.51	C
ATOM	14571	O	SER	D	159	54.718	47.089	106.775	1.00	83.52	O
ATOM	14572	N	TRP	D	160	52.768	46.211	107.471	1.00	87.04	N
ATOM	14574	CA	TRP	D	160	53.284	46.101	108.846	1.00	90.70	C
ATOM	14576	CB	TRP	D	160	52.378	46.873	109.763	1.00	89.83	C
ATOM	14579	CG	TRP	D	160	52.248	48.303	109.409	1.00	84.69	C
ATOM	14580	CD1	TRP	D	160	51.543	48.842	108.352	1.00	79.29	C
ATOM	14582	NE1	TRP	D	160	51.623	50.213	108.391	1.00	73.78	N
ATOM	14584	CE2	TRP	D	160	52.373	50.592	109.470	1.00	76.63	C
ATOM	14585	CD2	TRP	D	160	52.788	49.408	110.131	1.00	83.36	C
ATOM	14586	CE3	TRP	D	160	53.560	49.524	111.289	1.00	87.07	C
ATOM	14588	CZ3	TRP	D	160	53.910	50.795	111.732	1.00	86.68	C
ATOM	14590	CH2	TRP	D	160	53.494	51.947	111.041	1.00	80.65	C
ATOM	14592	CZ2	TRP	D	160	52.723	51.864	109.916	1.00	75.76	C
ATOM	14594	C	TRP	D	160	53.529	44.669	109.400	1.00	97.32	C
ATOM	14595	O	TRP	D	160	52.681	43.805	109.261	1.00	100.42	O
ATOM	14596	N	ASN	D	161	54.708	44.447	110.002	1.00	100.50	N
ATOM	14598	CA	ASN	D	161	55.107	43.189	110.664	1.00	107.59	C
ATOM	14600	CB	ASN	D	161	54.168	42.853	111.837	1.00	111.38	C
ATOM	14603	CG	ASN	D	161	54.071	43.990	112.867	1.00	109.86	C
ATOM	14604	OD1	ASN	D	161	53.451	43.837	113.914	1.00	113.63	O
ATOM	14605	ND2	ASN	D	161	54.700	45.122	112.572	1.00	104.12	N
ATOM	14608	C	ASN	D	161	55.201	42.031	109.686	1.00	109.80	C
ATOM	14609	O	ASN	D	161	54.581	40.995	109.890	1.00	113.89	O
ATOM	14610	N	SER	D	162	56.001	42.232	108.633	1.00	107.26	N
ATOM	14612	CA	SER	D	162	55.962	41.418	107.389	1.00	108.05	C
ATOM	14614	CB	SER	D	162	56.905	40.169	107.464	1.00	115.28	C
ATOM	14617	OG	SER	D	162	56.533	39.196	108.446	1.00	122.27	O
ATOM	14619	C	SER	D	162	54.515	41.104	106.843	1.00	106.92	C
ATOM	14620	O	SER	D	162	54.284	40.170	106.071	1.00	109.12	O
ATOM	14621	N	GLY	D	163	53.558	41.941	107.206	1.00	103.43	N
ATOM	14623	CA	GLY	D	163	52.218	41.849	106.659	1.00	102.77	C
ATOM	14626	C	GLY	D	163	51.214	41.161	107.561	1.00	107.96	C
ATOM	14627	O	GLY	D	163	50.140	40.801	107.100	1.00	109.21	O
ATOM	14628	N	ALA	D	164	51.541	40.998	108.842	1.00	111.31	N
ATOM	14630	CA	ALA	D	164	50.641	40.355	109.775	1.00	116.24	C

ATOM	14632	CB	ALA	D	164	51.422	39.829	110.979	1.00121.90	C
ATOM	14636	C	ALA	D	164	49.498	41.278	110.236	1.00113.12	C
ATOM	14637	O	ALA	D	164	48.523	40.774	110.836	1.00117.66	O
ATOM	14638	N	LEU	D	165	49.610	42.594	109.985	1.00106.18	N
ATOM	14640	CA	LEU	D	165	48.572	43.596	110.366	1.00103.35	C
ATOM	14642	CB	LEU	D	165	49.213	44.841	111.017	1.00100.01	C
ATOM	14645	CG	LEU	D	165	49.884	44.675	112.393	1.00104.07	C
ATOM	14647	CD1	LEU	D	165	49.895	46.010	113.140	1.00100.25	C
ATOM	14651	CD2	LEU	D	165	49.215	43.516	113.304	1.00113.44	C
ATOM	14655	C	LEU	D	165	47.666	44.060	109.206	1.00 99.38	C
ATOM	14656	O	LEU	D	165	48.126	44.281	108.107	1.00 95.88	O
ATOM	14657	N	THR	D	166	46.382	44.244	109.481	1.00100.31	N
ATOM	14659	CA	THR	D	166	45.386	44.436	108.428	1.00 98.64	C
ATOM	14661	CB	THR	D	166	44.681	43.068	108.100	1.00104.71	C
ATOM	14663	OG1	THR	D	166	45.324	42.495	106.961	1.00104.16	O
ATOM	14665	CG2	THR	D	166	43.167	43.212	107.657	1.00105.79	C
ATOM	14669	C	THR	D	166	44.388	45.506	108.810	1.00 96.21	C
ATOM	14670	O	THR	D	166	44.421	46.562	108.235	1.00 91.40	O
ATOM	14671	N	SER	D	167	43.492	45.242	109.755	1.00100.00	N
ATOM	14673	CA	SER	D	167	42.552	46.277	110.121	1.00 98.66	C
ATOM	14675	CB	SER	D	167	41.333	45.736	110.879	1.00103.89	C
ATOM	14678	OG	SER	D	167	41.735	45.120	112.053	1.00106.75	O
ATOM	14680	C	SER	D	167	43.307	47.389	110.895	1.00 95.73	C
ATOM	14681	O	SER	D	167	44.117	47.131	111.821	1.00 96.71	O
ATOM	14682	N	GLY	D	168	43.027	48.623	110.464	1.00 91.77	N
ATOM	14684	CA	GLY	D	168	43.655	49.807	110.982	1.00 89.03	C
ATOM	14687	C	GLY	D	168	44.604	50.335	109.936	1.00 84.96	C
ATOM	14688	O	GLY	D	168	45.008	51.438	110.086	1.00 83.18	O
ATOM	14689	N	VAL	D	169	44.892	49.580	108.871	1.00 84.50	N
ATOM	14691	CA	VAL	D	169	45.986	49.932	107.935	1.00 80.36	C
ATOM	14693	CB	VAL	D	169	46.696	48.697	107.290	1.00 82.08	C
ATOM	14695	CG1	VAL	D	169	47.829	49.109	106.355	1.00 76.99	C
ATOM	14699	CG2	VAL	D	169	47.248	47.793	108.385	1.00 87.51	C
ATOM	14703	C	VAL	D	169	45.440	50.853	106.859	1.00 76.27	C
ATOM	14704	O	VAL	D	169	44.763	50.448	105.886	1.00 75.78	O
ATOM	14705	N	HIS	D	170	45.770	52.104	107.099	1.00 72.66	N
ATOM	14707	CA	HIS	D	170	45.447	53.183	106.249	1.00 69.38	C
ATOM	14709	CB	HIS	D	170	44.796	54.234	107.116	1.00 70.06	C
ATOM	14712	CG	HIS	D	170	43.316	54.039	107.318	1.00 71.85	C
ATOM	14713	ND1	HIS	D	170	42.431	53.891	106.277	1.00 70.83	N
ATOM	14715	CE1	HIS	D	170	41.200	53.816	106.759	1.00 75.91	C
ATOM	14717	NE2	HIS	D	170	41.258	53.904	108.075	1.00 76.31	N
ATOM	14719	CD2	HIS	D	170	42.571	54.040	108.449	1.00 74.79	C
ATOM	14721	C	HIS	D	170	46.730	53.740	105.599	1.00 65.87	C
ATOM	14722	O	HIS	D	170	47.590	54.326	106.240	1.00 64.33	O
ATOM	14723	N	THR	D	171	46.813	53.616	104.287	1.00 64.92	N
ATOM	14725	CA	THR	D	171	48.045	53.890	103.569	1.00 61.85	C
ATOM	14727	CB	THR	D	171	48.525	52.618	102.809	1.00 63.26	C
ATOM	14729	OG1	THR	D	171	48.681	51.525	103.768	1.00 68.52	O
ATOM	14731	CG2	THR	D	171	49.922	52.775	102.220	1.00 60.74	C
ATOM	14735	C	THR	D	171	48.066	55.083	102.701	1.00 57.66	C
ATOM	14736	O	THR	D	171	49.097	55.421	102.275	1.00 59.99	O
ATOM	14737	N	PHE	D	172	47.052	55.841	102.493	1.00 56.24	N
ATOM	14739	CA	PHE	D	172	47.309	57.278	102.015	1.00 53.44	C
ATOM	14741	CB	PHE	D	172	47.980	58.182	103.068	1.00 52.85	C
ATOM	14744	CG	PHE	D	172	47.131	58.461	104.272	1.00 56.06	C
ATOM	14745	CD1	PHE	D	172	47.421	57.886	105.494	1.00 57.70	C
ATOM	14747	CE1	PHE	D	172	46.598	58.125	106.593	1.00 61.30	C
ATOM	14749	CZ	PHE	D	172	45.466	58.949	106.488	1.00 61.98	C
ATOM	14751	CE2	PHE	D	172	45.158	59.512	105.286	1.00 61.46	C
ATOM	14753	CD2	PHE	D	172	46.002	59.285	104.175	1.00 58.64	C
ATOM	14755	C	PHE	D	172	48.040	57.484	100.684	1.00 50.18	C
ATOM	14756	O	PHE	D	172	49.188	57.152	100.499	1.00 48.95	O
ATOM	14757	N	PRO	D	173	47.323	57.960	99.703	1.00 51.03	N
ATOM	14758	CA	PRO	D	173	47.966	58.259	98.437	1.00 50.61	C
ATOM	14760	CB	PRO	D	173	46.828	58.841	97.589	1.00 51.50	C
ATOM	14763	CG	PRO	D	173	45.802	59.112	98.483	1.00 53.99	C
ATOM	14766	CD	PRO	D	173	45.876	58.146	99.622	1.00 52.80	C

ATOM	14769	C	PRO	D	173	49.105	59.258	98.568	1.00	49.69	C
ATOM	14770	O	PRO	D	173	49.007	60.262	99.263	1.00	50.24	O
ATOM	14771	N	ALA	D	174	50.192	58.982	97.865	1.00	49.12	N
ATOM	14773	CA	ALA	D	174	51.333	59.885	97.868	1.00	48.07	C
ATOM	14775	CB	ALA	D	174	52.374	59.344	96.969	1.00	47.30	C
ATOM	14779	C	ALA	D	174	50.988	61.267	97.411	1.00	48.33	C
ATOM	14780	O	ALA	D	174	49.996	61.501	96.760	1.00	48.62	O
ATOM	14781	N	VAL	D	175	51.863	62.181	97.732	1.00	48.93	N
ATOM	14783	CA	VAL	D	175	51.693	63.544	97.311	1.00	50.08	C
ATOM	14785	CB	VAL	D	175	51.278	64.396	98.464	1.00	52.47	C
ATOM	14787	CG1	VAL	D	175	51.091	65.789	98.004	1.00	56.48	C
ATOM	14791	CG2	VAL	D	175	49.992	63.925	99.000	1.00	53.12	C
ATOM	14795	C	VAL	D	175	53.009	64.056	96.790	1.00	49.12	C
ATOM	14796	O	VAL	D	175	54.031	63.730	97.308	1.00	48.44	O
ATOM	14797	N	LEU	D	176	52.965	64.862	95.747	1.00	49.70	N
ATOM	14799	CA	LEU	D	176	54.162	65.349	95.125	1.00	49.52	C
ATOM	14801	CB	LEU	D	176	53.854	65.602	93.685	1.00	50.20	C
ATOM	14804	CG	LEU	D	176	54.982	66.015	92.758	1.00	51.28	C
ATOM	14806	CD1	LEU	D	176	56.160	65.079	92.906	1.00	51.18	C
ATOM	14810	CD2	LEU	D	176	54.408	65.949	91.360	1.00	51.54	C
ATOM	14814	C	LEU	D	176	54.528	66.631	95.771	1.00	51.36	C
ATOM	14815	O	LEU	D	176	53.750	67.559	95.800	1.00	53.28	O
ATOM	14816	N	GLN	D	177	55.703	66.664	96.348	1.00	52.30	N
ATOM	14818	CA	GLN	D	177	56.173	67.852	97.072	1.00	55.83	C
ATOM	14820	CB	GLN	D	177	57.242	67.468	98.109	1.00	56.07	C
ATOM	14823	CG	GLN	D	177	56.885	66.367	99.070	1.00	53.77	C
ATOM	14826	CD	GLN	D	177	58.093	65.861	99.821	1.00	55.31	C
ATOM	14827	OE1	GLN	D	177	59.134	66.373	99.640	1.00	67.15	O
ATOM	14828	NE2	GLN	D	177	57.940	64.937	100.701	1.00	56.54	N
ATOM	14831	C	GLN	D	177	56.753	68.909	96.092	1.00	57.83	C
ATOM	14832	O	GLN	D	177	56.895	68.652	94.905	1.00	57.07	O
ATOM	14833	N	SER	D	178	57.105	70.086	96.594	1.00	61.86	N
ATOM	14835	CA	SER	D	178	57.698	71.128	95.747	1.00	64.24	C
ATOM	14837	CB	SER	D	178	57.821	72.425	96.515	1.00	68.85	C
ATOM	14840	OG	SER	D	178	56.592	73.127	96.433	1.00	70.78	O
ATOM	14842	C	SER	D	178	59.054	70.760	95.178	1.00	63.76	C
ATOM	14843	O	SER	D	178	59.474	71.301	94.193	1.00	64.54	O
ATOM	14844	N	SER	D	179	59.735	69.827	95.820	1.00	63.67	N
ATOM	14846	CA	SER	D	179	61.005	69.276	95.324	1.00	63.08	C
ATOM	14848	CB	SER	D	179	61.691	68.545	96.476	1.00	63.84	C
ATOM	14851	OG	SER	D	179	60.849	67.484	97.003	1.00	62.76	O
ATOM	14853	C	SER	D	179	60.897	68.260	94.149	1.00	60.11	C
ATOM	14854	O	SER	D	179	61.972	67.795	93.639	1.00	60.04	O
ATOM	14855	N	GLY	D	180	59.651	67.856	93.788	1.00	56.93	N
ATOM	14857	CA	GLY	D	180	59.442	66.838	92.771	1.00	53.61	C
ATOM	14860	C	GLY	D	180	59.604	65.423	93.306	1.00	51.38	C
ATOM	14861	O	GLY	D	180	59.592	64.412	92.557	1.00	49.29	O
ATOM	14862	N	LEU	D	181	59.728	65.348	94.623	1.00	51.34	N
ATOM	14864	CA	LEU	D	181	59.769	64.068	95.288	1.00	50.39	C
ATOM	14866	CB	LEU	D	181	60.814	64.149	96.347	1.00	52.46	C
ATOM	14869	CG	LEU	D	181	62.218	64.303	95.845	1.00	53.18	C
ATOM	14871	CD1	LEU	D	181	63.179	64.532	97.017	1.00	53.74	C
ATOM	14875	CD2	LEU	D	181	62.516	63.006	95.073	1.00	51.26	C
ATOM	14879	C	LEU	D	181	58.437	63.756	95.964	1.00	49.42	C
ATOM	14880	O	LEU	D	181	57.823	64.632	96.590	1.00	50.84	O
ATOM	14881	N	TYR	D	182	57.995	62.517	95.866	1.00	47.37	N
ATOM	14883	CA	TYR	D	182	56.805	62.099	96.625	1.00	47.21	C
ATOM	14885	CB	TYR	D	182	56.283	60.780	96.092	1.00	46.17	C
ATOM	14888	CG	TYR	D	182	55.767	60.930	94.708	1.00	45.87	C
ATOM	14889	CD1	TYR	D	182	56.557	60.615	93.633	1.00	46.82	C
ATOM	14891	CE1	TYR	D	182	56.098	60.809	92.348	1.00	48.35	C
ATOM	14893	CZ	TYR	D	182	54.813	61.268	92.138	1.00	47.09	C
ATOM	14894	OH	TYR	D	182	54.417	61.435	90.868	1.00	45.62	O
ATOM	14896	CE2	TYR	D	182	54.012	61.607	93.185	1.00	45.99	C
ATOM	14898	CD2	TYR	D	182	54.494	61.461	94.465	1.00	46.47	C
ATOM	14900	C	TYR	D	182	57.045	61.914	98.120	1.00	48.05	C
ATOM	14901	O	TYR	D	182	58.117	61.576	98.545	1.00	48.45	O
ATOM	14902	N	SER	D	183	56.034	62.171	98.915	1.00	48.87	N

ATOM	14904	CA	SER	D	183	55.925	61.467	100.149	1.00 51.41	C
ATOM	14906	CB	SER	D	183	56.474	62.252	101.324	1.00 53.74	C
ATOM	14909	OG	SER	D	183	55.445	62.952	101.902	1.00 57.05	O
ATOM	14911	C	SER	D	183	54.518	60.978	100.430	1.00 51.30	C
ATOM	14912	O	SER	D	183	53.558	61.281	99.726	1.00 50.46	O
ATOM	14913	N	LEU	D	184	54.452	60.236	101.521	1.00 53.32	N
ATOM	14915	CA	LEU	D	184	53.409	59.260	101.805	1.00 54.25	C
ATOM	14917	CB	LEU	D	184	53.948	57.905	101.387	1.00 54.63	C
ATOM	14920	CG	LEU	D	184	53.018	56.728	101.250	1.00 54.80	C
ATOM	14922	CD1	LEU	D	184	52.219	56.950	100.076	1.00 53.73	C
ATOM	14926	CD2	LEU	D	184	53.879	55.526	101.028	1.00 57.84	C
ATOM	14930	C	LEU	D	184	53.275	59.190	103.308	1.00 56.22	C
ATOM	14931	O	LEU	D	184	54.094	59.680	104.021	1.00 57.29	O
ATOM	14932	N	SER	D	185	52.272	58.516	103.800	1.00 57.35	N
ATOM	14934	CA	SER	D	185	52.379	58.007	105.174	1.00 59.70	C
ATOM	14936	CB	SER	D	185	52.049	59.067	106.224	1.00 61.87	C
ATOM	14939	OG	SER	D	185	50.921	59.813	105.836	1.00 63.92	O
ATOM	14941	C	SER	D	185	51.474	56.865	105.319	1.00 58.54	C
ATOM	14942	O	SER	D	185	50.405	56.906	104.803	1.00 55.56	O
ATOM	14943	N	SER	D	186	51.955	55.837	105.977	1.00 60.18	N
ATOM	14945	CA	SER	D	186	51.078	54.790	106.428	1.00 63.53	C
ATOM	14947	CB	SER	D	186	51.565	53.439	105.983	1.00 64.38	C
ATOM	14950	OG	SER	D	186	51.306	52.536	107.024	1.00 69.79	O
ATOM	14952	C	SER	D	186	50.824	54.828	107.946	1.00 66.75	C
ATOM	14953	O	SER	D	186	51.600	55.365	108.716	1.00 68.12	O
ATOM	14954	N	VAL	D	187	49.700	54.263	108.364	1.00 69.09	N
ATOM	14956	CA	VAL	D	187	49.165	54.560	109.697	1.00 72.02	C
ATOM	14958	CB	VAL	D	187	48.374	55.912	109.640	1.00 70.96	C
ATOM	14960	CG1	VAL	D	187	47.059	55.856	110.271	1.00 72.97	C
ATOM	14964	CG2	VAL	D	187	49.184	57.018	110.284	1.00 72.15	C
ATOM	14968	C	VAL	D	187	48.375	53.380	110.180	1.00 74.57	C
ATOM	14969	O	VAL	D	187	47.765	52.687	109.388	1.00 73.67	O
ATOM	14970	N	VAL	D	188	48.480	53.089	111.467	1.00 78.78	N
ATOM	14972	CA	VAL	D	188	47.669	52.026	112.060	1.00 83.05	C
ATOM	14974	CB	VAL	D	188	48.424	50.763	112.506	1.00 86.25	C
ATOM	14976	CG1	VAL	D	188	47.620	49.558	112.107	1.00 88.84	C
ATOM	14980	CG2	VAL	D	188	49.766	50.672	111.881	1.00 86.59	C
ATOM	14984	C	VAL	D	188	46.954	52.550	113.272	1.00 86.01	C
ATOM	14985	O	VAL	D	188	47.492	53.373	114.027	1.00 87.50	O
ATOM	14986	N	THR	D	189	45.717	52.090	113.409	1.00 87.42	N
ATOM	14988	CA	THR	D	189	45.015	52.183	114.633	1.00 90.97	C
ATOM	14990	CB	THR	D	189	43.536	52.320	114.347	1.00 91.22	C
ATOM	14992	OG1	THR	D	189	43.307	53.207	113.261	1.00 85.40	O
ATOM	14994	CG2	THR	D	189	42.842	52.982	115.480	1.00 95.29	C
ATOM	14998	C	THR	D	189	45.331	50.835	115.304	1.00 95.78	C
ATOM	14999	O	THR	D	189	45.260	49.755	114.672	1.00 96.14	O
ATOM	15000	N	VAL	D	190	45.746	50.884	116.561	1.00 99.65	N
ATOM	15002	CA	VAL	D	190	45.807	49.661	117.344	1.00105.40	C
ATOM	15004	CB	VAL	D	190	47.212	48.949	117.308	1.00106.50	C
ATOM	15006	CG1	VAL	D	190	47.112	47.459	117.879	1.00113.44	C
ATOM	15010	CG2	VAL	D	190	47.766	48.880	115.927	1.00101.20	C
ATOM	15014	C	VAL	D	190	45.413	49.955	118.791	1.00110.32	C
ATOM	15015	O	VAL	D	190	45.707	51.074	119.275	1.00109.76	O
ATOM	15016	N	PRO	D	191	44.744	48.985	119.460	1.00114.97	N
ATOM	15017	CA	PRO	D	191	44.542	49.062	120.915	1.00120.91	C
ATOM	15019	CB	PRO	D	191	44.043	47.643	121.300	1.00125.96	C
ATOM	15022	CG	PRO	D	191	44.151	46.807	120.045	1.00123.19	C
ATOM	15025	CD	PRO	D	191	44.102	47.772	118.900	1.00115.97	C
ATOM	15028	C	PRO	D	191	45.853	49.394	121.632	1.00122.98	C
ATOM	15029	O	PRO	D	191	46.839	48.659	121.471	1.00123.92	O
ATOM	15030	N	SER	D	192	45.865	50.488	122.396	1.00124.39	N
ATOM	15032	CA	SER	D	192	47.084	50.948	123.089	1.00126.95	C
ATOM	15034	CB	SER	D	192	46.777	52.111	124.075	1.00129.91	C
ATOM	15037	OG	SER	D	192	45.532	51.972	124.740	1.00133.29	O
ATOM	15039	C	SER	D	192	47.947	49.817	123.741	1.00132.43	C
ATOM	15040	O	SER	D	192	49.151	49.762	123.488	1.00131.87	O
ATOM	15041	N	SER	D	193	47.354	48.897	124.509	1.00137.70	N
ATOM	15043	CA	SER	D	193	48.126	47.756	125.053	1.00143.45	C

ATOM	15045	CB	SER	D	193	47.327	46.438	125.055	1.00146.12	C
ATOM	15048	OG	SER	D	193	46.031	46.630	125.549	1.00145.50	O
ATOM	15050	C	SER	D	193	49.469	47.537	124.314	1.00141.77	C
ATOM	15051	O	SER	D	193	50.505	48.003	124.802	1.00144.72	O
ATOM	15052	N	SER	D	194	49.431	46.911	123.120	1.00137.58	N
ATOM	15054	CA	SER	D	194	50.576	46.172	122.505	1.00137.39	C
ATOM	15056	CB	SER	D	194	51.823	47.067	122.336	1.00136.79	C
ATOM	15059	OG	SER	D	194	51.599	48.394	122.757	1.00130.77	O
ATOM	15061	C	SER	D	194	50.904	44.805	123.248	1.00146.68	C
ATOM	15062	O	SER	D	194	52.066	44.543	123.660	1.00150.94	O
ATOM	15063	N	LEU	D	195	49.851	43.974	123.443	1.00150.16	N
ATOM	15065	CA	LEU	D	195	49.925	42.548	123.927	1.00158.06	C
ATOM	15067	CB	LEU	D	195	48.727	42.204	124.827	1.00162.41	C
ATOM	15073	C	LEU	D	195	49.952	41.592	122.701	1.00156.29	C
ATOM	15074	O	LEU	D	195	49.549	42.026	121.607	1.00149.95	O
ATOM	15075	N	GLY	D	196	50.425	40.340	122.842	1.00162.68	N
ATOM	15077	CA	GLY	D	196	50.727	39.497	121.675	1.00161.42	C
ATOM	15080	C	GLY	D	196	51.318	40.257	120.455	1.00153.51	C
ATOM	15081	O	GLY	D	196	50.581	40.655	119.512	1.00147.54	O
ATOM	15082	N	THR	D	197	52.642	40.478	120.464	1.00153.86	N
ATOM	15084	CA	THR	D	197	53.368	41.350	119.480	1.00146.39	C
ATOM	15086	CB	THR	D	197	53.254	40.820	117.993	1.00142.49	C
ATOM	15088	OG1	THR	D	197	54.045	39.617	117.882	1.00149.06	O
ATOM	15090	CG2	THR	D	197	53.887	41.806	116.926	1.00133.52	C
ATOM	15094	C	THR	D	197	53.138	42.899	119.643	1.00140.17	C
ATOM	15095	O	THR	D	197	52.525	43.607	118.818	1.00132.05	O
ATOM	15096	N	GLN	D	198	53.709	43.363	120.759	1.00144.11	N
ATOM	15098	CA	GLN	D	198	53.825	44.764	121.116	1.00140.43	C
ATOM	15100	CB	GLN	D	198	54.459	44.898	122.532	1.00147.96	C
ATOM	15107	C	GLN	D	198	54.697	45.496	120.114	1.00134.16	C
ATOM	15108	O	GLN	D	198	54.789	46.710	120.188	1.00130.78	O
ATOM	15109	N	THR	D	199	55.332	44.766	119.190	1.00133.07	N
ATOM	15111	CA	THR	D	199	56.296	45.351	118.244	1.00128.45	C
ATOM	15113	CB	THR	D	199	57.444	44.346	117.891	1.00132.44	C
ATOM	15115	OG1	THR	D	199	57.295	43.134	118.631	1.00139.60	O
ATOM	15117	CG2	THR	D	199	58.814	44.873	118.344	1.00135.37	C
ATOM	15121	C	THR	D	199	55.626	45.857	116.943	1.00120.09	C
ATOM	15122	O	THR	D	199	55.024	45.084	116.183	1.00118.92	O
ATOM	15123	N	TYR	D	200	55.751	47.155	116.680	1.00115.03	N
ATOM	15125	CA	TYR	D	200	55.213	47.730	115.454	1.00107.62	C
ATOM	15127	CB	TYR	D	200	54.281	48.908	115.795	1.00104.46	C
ATOM	15130	CG	TYR	D	200	53.147	48.489	116.711	1.00106.68	C
ATOM	15131	CD1	TYR	D	200	52.975	49.070	117.970	1.00109.12	C
ATOM	15133	CE1	TYR	D	200	51.963	48.664	118.811	1.00111.35	C
ATOM	15135	CZ	TYR	D	200	51.115	47.661	118.401	1.00111.91	C
ATOM	15136	OH	TYR	D	200	50.096	47.221	119.207	1.00115.71	O
ATOM	15138	CE2	TYR	D	200	51.271	47.068	117.166	1.00109.67	C
ATOM	15140	CD2	TYR	D	200	52.277	47.479	116.333	1.00106.06	C
ATOM	15142	C	TYR	D	200	56.346	48.132	114.499	1.00104.92	C
ATOM	15143	O	TYR	D	200	57.050	49.105	114.738	1.00104.47	O
ATOM	15144	N	ILE	D	201	56.521	47.366	113.424	1.00103.81	N
ATOM	15146	CA	ILE	D	201	57.545	47.671	112.429	1.00102.21	C
ATOM	15148	CB	ILE	D	201	58.684	46.590	112.496	1.00107.75	C
ATOM	15150	CG1	ILE	D	201	59.393	46.656	113.856	1.00113.72	C
ATOM	15153	CD1	ILE	D	201	60.523	45.656	114.048	1.00119.86	C
ATOM	15157	CG2	ILE	D	201	59.717	46.792	111.336	1.00105.63	C
ATOM	15161	C	ILE	D	201	56.997	47.807	110.980	1.00 96.83	C
ATOM	15162	O	ILE	D	201	56.436	46.849	110.436	1.00 97.98	O
ATOM	15163	N	CYS	D	202	57.184	48.959	110.330	1.00 92.25	N
ATOM	15165	CA	CYS	D	202	56.695	49.076	108.944	1.00 87.63	C
ATOM	15167	CB	CYS	D	202	56.006	50.398	108.708	1.00 83.22	C
ATOM	15170	SG	CYS	D	202	57.133	51.729	108.422	1.00 81.91	S
ATOM	15171	C	CYS	D	202	57.728	48.846	107.836	1.00 86.17	C
ATOM	15172	O	CYS	D	202	58.868	49.308	107.923	1.00 86.56	O
ATOM	15173	N	ASN	D	203	57.254	48.177	106.780	1.00 84.31	N
ATOM	15175	CA	ASN	D	203	58.079	47.615	105.732	1.00 84.05	C
ATOM	15177	CB	ASN	D	203	57.692	46.171	105.447	1.00 87.34	C
ATOM	15180	CG	ASN	D	203	57.400	45.402	106.715	1.00 93.02	C

ATOM	15181	OD1	ASN	D	203	58.163	45.443	107.705	1.00	94.19	O
ATOM	15182	ND2	ASN	D	203	56.273	44.708	106.709	1.00	95.69	N
ATOM	15185	C	ASN	D	203	57.828	48.450	104.543	1.00	78.21	C
ATOM	15186	O	ASN	D	203	56.798	48.349	103.918	1.00	77.07	O
ATOM	15187	N	VAL	D	204	58.774	49.310	104.262	1.00	75.80	N
ATOM	15189	CA	VAL	D	204	58.728	50.161	103.109	1.00	71.12	C
ATOM	15191	CB	VAL	D	204	59.273	51.551	103.467	1.00	69.36	C
ATOM	15193	CG1	VAL	D	204	58.892	52.562	102.404	1.00	64.60	C
ATOM	15197	CG2	VAL	D	204	58.753	51.967	104.837	1.00	69.88	C
ATOM	15201	C	VAL	D	204	59.544	49.533	101.980	1.00	71.71	C
ATOM	15202	O	VAL	D	204	60.760	49.405	102.076	1.00	73.45	O
ATOM	15203	N	ASN	D	205	58.867	49.133	100.912	1.00	70.66	N
ATOM	15205	CA	ASN	D	205	59.554	48.715	99.697	1.00	71.49	C
ATOM	15207	CB	ASN	D	205	59.047	47.351	99.229	1.00	74.94	C
ATOM	15210	CG	ASN	D	205	59.923	46.761	98.143	1.00	78.41	C
ATOM	15211	OD1	ASN	D	205	60.868	46.022	98.437	1.00	84.36	O
ATOM	15212	ND2	ASN	D	205	59.661	47.141	96.874	1.00	77.11	N
ATOM	15215	C	ASN	D	205	59.436	49.745	98.564	1.00	66.99	C
ATOM	15216	O	ASN	D	205	58.335	50.165	98.188	1.00	65.08	O
ATOM	15217	N	HIS	D	206	60.575	50.160	98.031	1.00	66.16	N
ATOM	15219	CA	HIS	D	206	60.573	51.013	96.867	1.00	63.53	C
ATOM	15221	CB	HIS	D	206	61.317	52.331	97.165	1.00	62.70	C
ATOM	15224	CG	HIS	D	206	61.168	53.375	96.096	1.00	59.74	C
ATOM	15225	ND1	HIS	D	206	62.041	53.481	95.038	1.00	60.76	N
ATOM	15227	CE1	HIS	D	206	61.660	54.482	94.258	1.00	60.76	C
ATOM	15229	NE2	HIS	D	206	60.570	55.028	94.772	1.00	56.00	N
ATOM	15231	CD2	HIS	D	206	60.261	54.371	95.937	1.00	57.75	C
ATOM	15233	C	HIS	D	206	61.213	50.257	95.718	1.00	65.17	C
ATOM	15234	O	HIS	D	206	62.419	50.373	95.513	1.00	66.55	O
ATOM	15235	N	LYS	D	207	60.399	49.504	94.963	1.00	65.74	N
ATOM	15237	CA	LYS	D	207	60.878	48.605	93.893	1.00	67.90	C
ATOM	15239	CB	LYS	D	207	59.738	47.730	93.323	1.00	69.51	C
ATOM	15246	C	LYS	D	207	61.623	49.304	92.746	1.00	65.87	C
ATOM	15247	O	LYS	D	207	62.591	48.740	92.218	1.00	69.15	O
ATOM	15248	N	PRO	D	208	61.243	50.518	92.351	1.00	61.80	N
ATOM	15249	CA	PRO	D	208	61.943	51.167	91.206	1.00	60.92	C
ATOM	15251	CB	PRO	D	208	61.030	52.336	90.824	1.00	56.74	C
ATOM	15254	CG	PRO	D	208	60.162	52.553	91.983	1.00	55.16	C
ATOM	15257	CD	PRO	D	208	60.202	51.389	92.929	1.00	58.46	C
ATOM	15260	C	PRO	D	208	63.412	51.630	91.492	1.00	61.31	C
ATOM	15261	O	PRO	D	208	64.183	51.824	90.547	1.00	61.70	O
ATOM	15262	N	SER	D	209	63.764	51.760	92.771	1.00	61.75	N
ATOM	15264	CA	SER	D	209	65.107	52.100	93.230	1.00	63.81	C
ATOM	15266	CB	SER	D	209	65.067	53.338	94.118	1.00	61.67	C
ATOM	15269	OG	SER	D	209	64.729	53.003	95.435	1.00	61.97	O
ATOM	15271	C	SER	D	209	65.706	51.015	94.078	1.00	68.74	C
ATOM	15272	O	SER	D	209	66.705	51.256	94.740	1.00	71.24	O
ATOM	15273	N	ASN	D	210	65.085	49.836	94.113	1.00	70.96	N
ATOM	15275	CA	ASN	D	210	65.640	48.698	94.851	1.00	75.73	C
ATOM	15277	CB	ASN	D	210	67.009	48.338	94.275	1.00	79.41	C
ATOM	15280	CG	ASN	D	210	67.493	47.009	94.735	1.00	85.45	C
ATOM	15281	OD1	ASN	D	210	66.693	46.147	95.042	1.00	86.85	O
ATOM	15282	ND2	ASN	D	210	68.826	46.840	94.825	1.00	91.76	N
ATOM	15285	C	ASN	D	210	65.746	48.906	96.367	1.00	76.54	C
ATOM	15286	O	ASN	D	210	66.441	48.163	97.027	1.00	81.20	O
ATOM	15287	N	THR	D	211	65.043	49.891	96.915	1.00	73.00	N
ATOM	15289	CA	THR	D	211	65.020	50.089	98.360	1.00	75.11	C
ATOM	15291	CB	THR	D	211	64.668	51.546	98.732	1.00	71.89	C
ATOM	15293	OG1	THR	D	211	64.896	52.438	97.628	1.00	70.10	O
ATOM	15295	CG2	THR	D	211	65.666	52.070	99.782	1.00	76.24	C
ATOM	15299	C	THR	D	211	64.044	49.148	99.040	1.00	76.40	C
ATOM	15300	O	THR	D	211	62.956	48.902	98.516	1.00	74.76	O
ATOM	15301	N	LYS	D	212	64.432	48.605	100.193	1.00	80.57	N
ATOM	15303	CA	LYS	D	212	63.545	47.720	100.946	1.00	82.72	C
ATOM	15305	CB	LYS	D	212	63.730	46.229	100.569	1.00	87.28	C
ATOM	15312	C	LYS	D	212	63.809	47.921	102.405	1.00	85.46	C
ATOM	15313	O	LYS	D	212	64.258	47.015	103.062	1.00	91.69	O
ATOM	15314	N	VAL	D	213	63.489	49.105	102.900	1.00	82.31	N

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ATOM 15316  CA  VAL D 213      63.725  49.519 104.291  1.00 85.17           C
ATOM 15318  CB  VAL D 213      63.756  51.057 104.298  1.00 82.29           C
ATOM 15320  CG1 VAL D 213      63.512  51.666 105.713  1.00 84.73           C
ATOM 15324  CG2 VAL D 213      65.083  51.527 103.696  1.00 84.19           C
ATOM 15328  C   VAL D 213      62.711  49.064 105.372  1.00 86.25           C
ATOM 15329  O   VAL D 213      61.532  49.006 105.129  1.00 82.68           O
ATOM 15330  N   ASP D 214      63.192  48.774 106.586  1.00 91.59           N
ATOM 15332  CA  ASP D 214      62.311  48.532 107.749  1.00 92.98           C
ATOM 15334  CB  ASP D 214      62.606  47.092 108.271  1.00 98.93           C
ATOM 15337  CG  ASP D 214      62.194  46.035 107.204  1.00 97.80           C
ATOM 15338  OD1 ASP D 214      61.385  46.349 106.310  1.00 92.43           O
ATOM 15339  OD2 ASP D 214      62.686  44.884 107.157  1.00100.35           O
ATOM 15340  C   ASP D 214      62.580  49.592 108.846  1.00 94.11           C
ATOM 15341  O   ASP D 214      63.738  50.011 109.018  1.00 97.04           O
ATOM 15342  N   LYS D 215      61.519  50.079 109.507  1.00 91.96           N
ATOM 15344  CA  LYS D 215      61.627  50.915 110.722  1.00 94.21           C
ATOM 15346  CB  LYS D 215      61.440  52.411 110.394  1.00 88.82           C
ATOM 15353  C   LYS D 215      60.643  50.460 111.849  1.00 96.87           C
ATOM 15354  O   LYS D 215      59.545  50.002 111.586  1.00 94.60           O
ATOM 15355  N   ARG D 216      61.060  50.595 113.105  1.00102.63           N
ATOM 15357  CA  ARG D 216      60.210  50.347 114.279  1.00105.91           C
ATOM 15359  CB  ARG D 216      61.002  49.578 115.347  1.00114.01           C
ATOM 15368  C   ARG D 216      59.655  51.654 114.900  1.00104.92           C
ATOM 15369  O   ARG D 216      60.344  52.686 114.955  1.00104.73           O
ATOM 15370  N   VAL D 217      58.416  51.599 115.392  1.00104.77           N
ATOM 15372  CA  VAL D 217      57.769  52.766 116.007  1.00104.59           C
ATOM 15374  CB  VAL D 217      56.461  53.206 115.224  1.00 98.42           C
ATOM 15376  CG1 VAL D 217      55.939  54.582 115.703  1.00 97.76           C
ATOM 15380  CG2 VAL D 217      56.697  53.270 113.726  1.00 92.68           C
ATOM 15384  C   VAL D 217      57.968  52.519 117.502  1.00111.16           C
ATOM 15385  O   VAL D 217      56.318  52.305 117.890  1.00111.38           O
ATOM 15386  N   GLU D 218      58.506  52.549 118.337  1.00117.44           N
ATOM 15388  CA  GLU D 218      58.321  52.507 119.788  1.00124.37           C
ATOM 15390  CB  GLU D 218      59.670  52.285 120.523  1.00132.09           C
ATOM 15393  CG  GLU D 218      60.454  51.010 120.158  1.00134.04           C
ATOM 15396  CD  GLU D 218      61.880  51.285 119.658  1.00134.59           C
ATOM 15397  OE1 GLU D 218      62.817  51.026 120.429  1.00140.64           O
ATOM 15398  OE2 GLU D 218      62.079  51.756 118.499  1.00128.11           O
ATOM 15399  C   GLU D 218      57.741  53.874 120.171  1.00123.49           C
ATOM 15400  O   GLU D 218      57.926  54.837 119.434  1.00119.12           O
ATOM 15401  N   PRO D 219      57.050  53.982 121.306  1.00128.14           N
ATOM 15402  CA  PRO D 219      56.704  55.312 121.852  1.00129.40           C
ATOM 15404  CB  PRO D 219      55.714  54.997 122.995  1.00133.43           C
ATOM 15407  CG  PRO D 219      55.987  53.558 123.371  1.00137.50           C
ATOM 15410  CD  PRO D 219      56.555  52.876 122.145  1.00132.81           C
ATOM 15413  C   PRO D 219      57.965  56.083 122.345  1.00134.98           C
ATOM 15414  O   PRO D 219      59.093  55.751 121.941  1.00136.16           O
ATOM 15415  N   LYS D 220      57.773  57.114 123.171  1.00138.92           N
ATOM 15417  CA  LYS D 220      58.896  57.870 123.769  1.00144.98           C
ATOM 15419  CB  LYS D 220      59.535  58.834 122.740  1.00140.79           C
ATOM 15426  C   LYS D 220      58.390  58.627 125.010  1.00151.08           C
ATOM 15427  O   LYS D 220      57.270  59.161 124.935  1.00147.70           O
ATOM 15428  OXT LYS D 220      59.055  58.684 126.069  1.00159.07           O
ATOM 15429  C1  NAG E 321      29.462  -7.124  22.592  1.00106.85           C
ATOM 15432  C2  NAG E 321      28.616  -8.080  23.433  1.00108.34           C
ATOM 15434  N2  NAG E 321      27.778  -7.288  24.383  1.00103.56           N
ATOM 15436  C7  NAG E 321      26.642  -6.621  24.066  1.00100.08           C
ATOM 15437  O7  NAG E 321      25.925  -6.934  23.152  1.00101.12           O
ATOM 15438  C8  NAG E 321      26.201  -5.421  24.839  1.00 96.46           C
ATOM 15442  C3  NAG E 321      29.493  -9.202  24.102  1.00112.92           C
ATOM 15444  O3  NAG E 321      28.990 -10.588  23.960  1.00118.55           O
ATOM 15446  C4  NAG E 321      31.051  -9.069  23.931  1.00113.06           C
ATOM 15448  O4  NAG E 321      31.842  -9.641  24.956  1.00113.90           O
ATOM 15450  C5  NAG E 321      31.401  -7.591  23.904  1.00108.70           C
ATOM 15452  C6  NAG E 321      32.887  -7.238  24.154  1.00106.46           C
ATOM 15455  O6  NAG E 321      33.769  -8.115  23.495  1.00106.75           O
ATOM 15457  O5  NAG E 321      30.883  -7.285  22.627  1.00108.92           O
ATOM 15458  C1  NAG E 322      29.267  -9.662  26.756  1.00110.31           C
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ATOM 15461  C2  NAG E 322      28.521 -10.967  26.426  1.00114.38           C
ATOM 15463  N2  NAG E 322      28.052 -10.913  25.020  1.00116.92           N
ATOM 15465  C7  NAG E 322      28.385 -11.780  24.057  1.00119.42           C
ATOM 15466  O7  NAG E 322      29.320 -11.475  23.340  1.00121.28           O
ATOM 15467  C8  NAG E 322      27.607 -13.054  23.839  1.00120.01           C
ATOM 15471  C3  NAG E 322      27.408 -11.226  27.470  1.00113.49           C
ATOM 15473  O3  NAG E 322      26.898 -12.548  27.431  1.00115.37           O
ATOM 15475  C4  NAG E 322      27.936 -10.952  28.884  1.00112.48           C
ATOM 15477  O4  NAG E 322      26.846 -11.144  29.763  1.00111.54           O
ATOM 15479  C5  NAG E 322      28.645  -9.568  28.956  1.00109.09           C
ATOM 15481  C6  NAG E 322      29.263  -9.135  30.280  1.00107.46           C
ATOM 15484  O6  NAG E 322      28.277  -8.551  31.092  1.00105.99           O
ATOM 15486  O5  NAG E 322      29.744  -9.611  28.071  1.00109.51           O
ATOM 15487  C1  MAN E 323      27.558 -13.638  31.168  1.00118.90           C
ATOM 15490  C2  MAN E 323      26.564 -13.183  32.294  1.00117.77           C
ATOM 15492  O2  MAN E 323      26.868 -11.917  32.907  1.00116.43           O
ATOM 15494  C3  MAN E 323      25.081 -13.205  31.860  1.00117.73           C
ATOM 15496  O3  MAN E 323      24.400 -11.977  32.023  1.00112.67           O
ATOM 15498  C4  MAN E 323      24.976 -13.765  30.434  1.00119.97           C
ATOM 15500  O4  MAN E 323      23.637 -13.872  30.008  1.00121.73           O
ATOM 15502  C5  MAN E 323      25.750 -15.104  30.461  1.00122.58           C
ATOM 15504  C6  MAN E 323      25.209 -16.307  29.627  1.00125.63           C
ATOM 15507  O6  MAN E 323      24.816 -16.087  28.285  1.00125.42           O
ATOM 15509  O5  MAN E 323      27.124 -14.727  30.312  1.00121.55           O
ATOM 15510  C1  MAN E 324      25.902 -11.845  35.755  1.00115.15           C
ATOM 15513  C2  MAN E 324      27.196 -11.304  35.140  1.00112.82           C
ATOM 15515  O2  MAN E 324      26.996 -11.188  33.736  1.00113.36           O
ATOM 15517  C3  MAN E 324      27.691  -9.982  35.758  1.00109.46           C
ATOM 15519  O3  MAN E 324      28.466  -9.354  34.763  1.00107.10           O
ATOM 15521  C4  MAN E 324      26.596  -8.988  36.246  1.00108.78           C
ATOM 15523  O4  MAN E 324      27.023  -8.082  37.287  1.00103.92           O
ATOM 15525  C5  MAN E 324      25.275  -9.715  36.643  1.00112.59           C
ATOM 15527  C6  MAN E 324      24.102  -8.722  36.842  1.00110.06           C
ATOM 15530  O6  MAN E 324      23.750  -8.085  35.622  1.00108.11           O
ATOM 15532  O5  MAN E 324      24.926 -10.812  35.755  1.00114.60           O
ATOM 15533  C1  NAG E 881      51.524  67.218  74.770  1.00 82.89           C
ATOM 15536  C2  NAG E 881      50.338  68.025  74.160  1.00 83.13           C
ATOM 15538  N2  NAG E 881      49.032  67.353  73.995  1.00 82.71           N
ATOM 15540  C7  NAG E 881      47.991  67.386  74.866  1.00 82.73           C
ATOM 15541  O7  NAG E 881      47.798  66.346  75.237  1.00 78.34           O
ATOM 15542  C8  NAG E 881      47.603  68.758  75.385  1.00 84.08           C
ATOM 15546  C3  NAG E 881      50.819  68.571  72.803  1.00 83.44           C
ATOM 15548  O3  NAG E 881      49.657  69.047  72.125  1.00 81.68           O
ATOM 15550  C4  NAG E 881      52.075  69.513  72.964  1.00 84.89           C
ATOM 15552  O4  NAG E 881      52.660  69.876  71.736  1.00 84.61           O
ATOM 15554  C5  NAG E 881      53.218  68.848  73.783  1.00 83.76           C
ATOM 15556  C6  NAG E 881      54.566  69.652  74.031  1.00 85.43           C
ATOM 15559  O6  NAG E 881      54.704  71.055  74.263  1.00 83.52           O
ATOM 15561  O5  NAG E 881      52.665  68.147  74.940  1.00 86.69           O
ATOM 15562  C1  NAG E3281      49.375  31.629  48.905  1.00 52.84           C
ATOM 15565  C2  NAG E3281      49.482  31.018  50.297  1.00 51.74           C
ATOM 15567  N2  NAG E3281      50.091  31.941  51.249  1.00 51.34           N
ATOM 15569  C7  NAG E3281      49.384  32.526  52.211  1.00 50.13           C
ATOM 15570  O7  NAG E3281      48.435  32.032  52.749  1.00 53.22           O
ATOM 15571  C8  NAG E3281      49.756  33.856  52.704  1.00 50.66           C
ATOM 15575  C3  NAG E3281      50.226  29.684  50.255  1.00 52.62           C
ATOM 15577  O3  NAG E3281      50.116  29.054  51.488  1.00 52.27           O
ATOM 15579  C4  NAG E3281      49.732  28.723  49.174  1.00 54.50           C
ATOM 15581  O4  NAG E3281      50.703  27.716  48.931  1.00 54.62           O
ATOM 15582  C5  NAG E3281      49.375  29.441  47.856  1.00 54.70           C
ATOM 15584  C6  NAG E3281      48.447  28.552  47.010  1.00 55.71           C
ATOM 15587  O6  NAG E3281      47.278  28.100  47.717  1.00 53.23           O
ATOM 15589  O5  NAG E3281      48.735  30.686  48.078  1.00 51.91           O
ATOM 15590  C1  NAG E3282      50.357  26.487  49.573  1.00 54.61           C
ATOM 15592  C2  NAG E3282      51.035  25.314  48.888  1.00 56.44           C
ATOM 15594  N2  NAG E3282      50.443  25.157  47.600  1.00 56.42           N
ATOM 15596  C7  NAG E3282      50.897  25.560  46.412  1.00 57.36           C
ATOM 15597  O7  NAG E3282      51.890  26.176  46.141  1.00 58.44           O
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ATOM	15598	C8	NAG	E3282	50.036	25.176	45.269	1.00	58.52	C
ATOM	15602	C3	NAG	E3282	50.703	24.044	49.639	1.00	56.65	C
ATOM	15604	O3	NAG	E3282	51.439	22.899	49.223	1.00	60.43	O
ATOM	15606	C4	NAG	E3282	51.144	24.227	51.060	1.00	59.24	C
ATOM	15608	O4	NAG	E3282	50.928	22.982	51.702	1.00	59.30	O
ATOM	15609	C5	NAG	E3282	50.469	25.441	51.718	1.00	57.25	C
ATOM	15611	C6	NAG	E3282	51.087	25.744	53.078	1.00	55.87	C
ATOM	15614	O6	NAG	E3282	52.436	26.070	52.833	1.00	56.35	O
ATOM	15616	C5	NAG	E3282	50.700	26.585	50.922	1.00	56.55	C
ATOM	15617	C1	MAN	E3283	52.049	22.569	52.475	1.00	60.80	C
ATOM	15619	C2	MAN	E3283	51.547	22.103	53.804	1.00	59.65	C
ATOM	15621	O2	MAN	E3283	50.445	21.312	53.451	1.00	58.83	O
ATOM	15623	C3	MAN	E3283	52.518	21.233	54.574	1.00	61.41	C
ATOM	15625	O3	MAN	E3283	51.787	20.219	55.195	1.00	63.34	O
ATOM	15626	C4	MAN	E3283	53.562	20.456	53.794	1.00	64.14	C
ATOM	15628	O4	MAN	E3283	54.592	20.336	54.757	1.00	65.32	O
ATOM	15630	C5	MAN	E3283	53.906	21.185	52.484	1.00	64.35	C
ATOM	15632	C6	MAN	E3283	54.827	20.559	51.427	1.00	66.91	C
ATOM	15635	O6	MAN	E3283	54.336	19.397	50.755	1.00	68.16	O
ATOM	15636	O5	MAN	E3283	52.651	21.452	51.873	1.00	66.18	O
ATOM	15637	C1	MAN	E3284	55.217	18.249	50.742	1.00	72.30	C
ATOM	15639	C2	MAN	E3284	55.266	17.684	52.167	1.00	74.79	C
ATOM	15641	O2	MAN	E3284	53.926	17.897	52.622	1.00	75.61	O
ATOM	15643	C3	MAN	E3284	55.505	16.199	52.355	1.00	77.19	C
ATOM	15645	O3	MAN	E3284	55.980	15.970	53.712	1.00	78.27	O
ATOM	15646	C4	MAN	E3284	54.050	15.999	51.891	1.00	74.76	C
ATOM	15648	O4	MAN	E3284	53.363	14.913	52.491	1.00	74.26	O
ATOM	15650	C5	MAN	E3284	54.093	16.166	50.311	1.00	75.13	C
ATOM	15652	C6	MAN	E3284	52.766	16.286	49.596	1.00	71.00	C
ATOM	15655	O6	MAN	E3284	51.799	16.197	50.591	1.00	67.75	O
ATOM	15656	O5	MAN	E3284	54.772	17.312	49.795	1.00	71.66	O
ATOM	15657	C1	MAN	E3287	56.557	14.726	54.281	1.00	82.57	C
ATOM	15659	C2	MAN	E3287	57.357	13.797	53.289	1.00	86.35	C
ATOM	15661	O2	MAN	E3287	58.723	13.344	53.449	1.00	90.50	O
ATOM	15662	C3	MAN	E3287	56.672	12.482	52.944	1.00	89.09	C
ATOM	15664	O3	MAN	E3287	57.659	11.558	52.507	1.00	90.57	O
ATOM	15666	C4	MAN	E3287	55.887	11.911	54.115	1.00	89.40	C
ATOM	15668	O4	MAN	E3287	55.294	10.689	53.706	1.00	92.89	O
ATOM	15670	C5	MAN	E3287	54.863	12.927	54.621	1.00	83.20	C
ATOM	15672	C6	MAN	E3287	54.078	12.364	55.791	1.00	82.64	C
ATOM	15675	O6	MAN	E3287	53.440	11.149	55.398	1.00	86.10	O
ATOM	15677	O5	MAN	E3287	55.586	14.035	55.127	1.00	82.62	O
ATOM	15678	C1	MAN	E3288	59.546	13.176	54.658	1.00	92.52	C
ATOM	15680	C2	MAN	E3288	59.349	14.272	55.676	1.00	89.65	C
ATOM	15682	O2	MAN	E3288	58.271	13.854	56.471	1.00	91.69	O
ATOM	15684	C3	MAN	E3288	60.452	14.356	56.660	1.00	90.23	C
ATOM	15686	O3	MAN	E3288	59.890	15.181	57.619	1.00	85.18	O
ATOM	15688	C4	MAN	E3288	60.741	13.016	57.331	1.00	94.39	C
ATOM	15690	O4	MAN	E3288	62.025	13.205	57.964	1.00	93.03	O
ATOM	15692	C5	MAN	E3288	60.590	11.833	56.315	1.00	97.46	C
ATOM	15694	C6	MAN	E3288	60.604	10.434	56.978	1.00	101.20	C
ATOM	15697	O6	MAN	E3288	59.305	9.870	57.154	1.00	102.55	O
ATOM	15699	O5	MAN	E3288	59.440	12.000	55.444	1.00	94.57	O
ATOM	15700	C1	MAN	E3285	52.312	20.696	57.165	1.00	71.22	C
ATOM	15702	C2	MAN	E3285	51.852	19.512	58.022	1.00	72.51	C
ATOM	15704	O2	MAN	E3285	52.078	19.647	59.410	1.00	75.71	O
ATOM	15705	C3	MAN	E3285	50.367	19.348	57.867	1.00	68.59	C
ATOM	15707	O3	MAN	E3285	50.001	18.467	58.884	1.00	72.03	O
ATOM	15709	C4	MAN	E3285	49.651	20.659	58.121	1.00	64.77	C
ATOM	15711	O4	MAN	E3285	48.263	20.485	57.943	1.00	65.10	O
ATOM	15713	C5	MAN	E3285	50.145	21.664	57.134	1.00	62.44	C
ATOM	15715	C6	MAN	E3285	49.441	22.972	57.332	1.00	57.64	C
ATOM	15718	O6	MAN	E3285	49.509	23.586	56.085	1.00	54.72	O
ATOM	15720	O5	MAN	E3285	51.537	21.875	57.328	1.00	68.41	O
ATOM	15721	C1	MAN	E3286	52.667	20.955	59.763	1.00	77.35	C
ATOM	15723	C2	MAN	E3286	52.629	21.164	61.302	1.00	76.62	C
ATOM	15725	O2	MAN	E3286	52.926	19.916	61.946	1.00	81.48	O
ATOM	15727	C3	MAN	E3286	53.567	22.287	61.783	1.00	73.66	C

ATOM	15729	O3	MAN	E3286	54.478	21.668	62.617	1.00 73.03	O
ATOM	15731	C4	MAN	E3286	54.473	23.006	60.754	1.00 75.14	C
ATOM	15733	O4	MAN	E3286	54.449	24.416	61.021	1.00 71.56	O
ATOM	15735	C5	MAN	E3286	54.173	22.670	59.260	1.00 76.43	C
ATOM	15737	C6	MAN	E3286	55.208	23.365	58.290	1.00 76.78	C
ATOM	15740	O6	MAN	E3286	55.328	23.003	56.888	1.00 76.61	O
ATOM	15742	O5	MAN	E3286	54.002	21.227	59.234	1.00 77.45	O
ATOM	15743	C1	MAN	E3289	50.258	15.461	49.783	1.00 75.63	C
ATOM	15745	C2	MAN	E3289	50.034	14.267	48.872	1.00 75.77	C
ATOM	15747	O2	MAN	E3289	48.660	14.201	48.764	1.00 72.18	O
ATOM	15749	C3	MAN	E3289	50.526	14.452	47.437	1.00 78.29	C
ATOM	15751	O3	MAN	E3289	49.933	13.510	46.572	1.00 79.15	O
ATOM	15753	C4	MAN	E3289	50.081	15.789	46.882	1.00 77.40	C
ATOM	15755	O4	MAN	E3289	50.521	15.836	45.541	1.00 77.75	O
ATOM	15757	C5	MAN	E3289	50.659	16.920	47.772	1.00 76.35	C
ATOM	15759	C6	MAN	E3289	50.230	18.330	47.313	1.00 71.38	C
ATOM	15762	O6	MAN	E3289	51.375	19.128	47.137	1.00 68.05	O
ATOM	15764	O5	MAN	E3289	50.198	16.752	49.136	1.00 76.70	O
ATOM	15765	C1	NAG	E3371	38.544	32.137	31.287	1.00 73.74	C
ATOM	15768	C2	NAG	E3371	39.910	31.524	30.912	1.00 72.50	C
ATOM	15770	N2	NAG	E3371	40.864	31.546	32.013	1.00 71.87	N
ATOM	15772	C7	NAG	E3371	41.239	30.472	32.757	1.00 70.84	C
ATOM	15773	O7	NAG	E3371	40.476	29.555	33.102	1.00 70.45	O
ATOM	15774	C8	NAG	E3371	42.672	30.426	33.238	1.00 70.39	C
ATOM	15778	C3	NAG	E3371	40.656	32.193	29.783	1.00 75.42	C
ATOM	15780	O3	NAG	E3371	41.791	31.359	29.440	1.00 77.30	O
ATOM	15782	C4	NAG	E3371	39.730	32.463	28.602	1.00 76.98	C
ATOM	15784	O4	NAG	E3371	40.419	33.182	27.568	1.00 80.73	O
ATOM	15785	C5	NAG	E3371	38.541	33.295	29.072	1.00 77.51	C
ATOM	15787	C6	NAG	E3371	37.559	33.426	27.908	1.00 79.31	C
ATOM	15790	O6	NAG	E3371	36.679	34.496	28.177	1.00 80.38	O
ATOM	15792	O5	NAG	E3371	37.813	32.803	30.226	1.00 77.42	O
ATOM	15793	C1	NAG	E3372	41.583	32.516	26.923	1.00 81.06	C
ATOM	15795	C2	NAG	E3372	42.328	33.443	25.948	1.00 82.94	C
ATOM	15797	N2	NAG	E3372	41.740	34.767	25.838	1.00 82.97	N
ATOM	15799	C7	NAG	E3372	42.233	35.902	26.335	1.00 82.90	C
ATOM	15800	O7	NAG	E3372	41.520	36.914	26.248	1.00 82.64	O
ATOM	15801	C8	NAG	E3372	43.607	35.961	26.991	1.00 82.07	C
ATOM	15805	C3	NAG	E3372	42.419	32.829	24.547	1.00 85.35	C
ATOM	15807	O3	NAG	E3372	43.287	33.591	23.635	1.00 87.85	O
ATOM	15809	C4	NAG	E3372	43.054	31.472	24.780	1.00 84.91	C
ATOM	15811	O4	NAG	E3372	43.723	30.920	23.637	1.00 91.00	O
ATOM	15812	C5	NAG	E3372	41.959	30.586	25.314	1.00 82.11	C
ATOM	15814	C6	NAG	E3372	42.432	29.260	25.924	1.00 80.32	C
ATOM	15817	O6	NAG	E3372	43.839	29.217	26.026	1.00 82.02	O
ATOM	15819	O5	NAG	E3372	41.168	31.317	26.251	1.00 83.28	O
ATOM	15820	C1	MAN	E3373	43.193	31.163	22.297	1.00 90.26	C
ATOM	15822	C2	MAN	E3373	43.289	29.790	21.572	1.00 89.29	C
ATOM	15824	O2	MAN	E3373	42.106	29.541	20.822	1.00 88.30	O
ATOM	15826	C3	MAN	E3373	44.594	29.551	20.798	1.00 90.57	C
ATOM	15828	O3	MAN	E3373	44.458	28.528	19.795	1.00 92.13	O
ATOM	15829	C4	MAN	E3373	45.145	30.855	20.206	1.00 93.50	C
ATOM	15831	O4	MAN	E3373	46.449	30.566	19.675	1.00 97.00	O
ATOM	15833	C5	MAN	E3373	45.156	32.027	21.232	1.00 91.21	C
ATOM	15835	C6	MAN	E3373	45.845	33.348	20.765	1.00 92.87	C
ATOM	15838	O6	MAN	E3373	45.180	34.027	19.709	1.00 91.50	O
ATOM	15840	O5	MAN	E3373	43.831	32.276	21.657	1.00 90.06	O
ATOM	15841	C1	MAN	E3374	45.299	27.327	19.975	1.00 91.45	C
ATOM	15843	C2	MAN	E3374	44.665	25.926	19.573	1.00 90.43	C
ATOM	15845	O2	MAN	E3374	43.307	25.675	19.923	1.00 85.56	O
ATOM	15847	C3	MAN	E3374	44.958	25.484	18.106	1.00 93.36	C
ATOM	15849	O3	MAN	E3374	43.909	25.879	17.264	1.00 92.46	O
ATOM	15851	C4	MAN	E3374	46.346	25.944	17.578	1.00 95.44	C
ATOM	15853	O4	MAN	E3374	47.038	24.929	16.892	1.00 96.98	O
ATOM	15855	C5	MAN	E3374	47.209	26.363	18.774	1.00 94.63	C
ATOM	15857	C6	MAN	E3374	48.726	26.471	18.535	1.00 95.51	C
ATOM	15860	O6	MAN	E3374	49.041	26.392	17.176	1.00 99.02	O
ATOM	15862	O5	MAN	E3374	46.576	27.526	19.340	1.00 94.07	O

ATOM	15863	C1	NAG	E3891	45.808	53.754	43.706	1.00	74.28	C
ATOM	15866	C2	NAG	E3891	45.380	54.293	42.335	1.00	76.79	C
ATOM	15868	N2	NAG	E3891	43.931	54.439	42.244	1.00	77.53	N
ATOM	15870	C7	NAG	E3891	43.082	53.652	41.542	1.00	79.46	C
ATOM	15871	O7	NAG	E3891	42.117	54.113	40.922	1.00	80.77	O
ATOM	15872	C8	NAG	E3891	43.269	52.147	41.487	1.00	77.83	C
ATOM	15876	C3	NAG	E3891	45.958	53.518	41.171	1.00	79.74	C
ATOM	15878	O3	NAG	E3891	45.933	54.287	39.941	1.00	85.15	O
ATOM	15880	C4	NAG	E3891	47.366	53.013	41.512	1.00	79.56	C
ATOM	15882	O4	NAG	E3891	47.766	52.108	40.515	1.00	81.56	O
ATOM	15884	C5	NAG	E3891	47.547	52.327	42.862	1.00	74.77	C
ATOM	15886	C6	NAG	E3891	49.038	51.935	43.162	1.00	76.89	C
ATOM	15889	O6	NAG	E3891	50.128	52.559	42.436	1.00	78.59	O
ATOM	15891	O5	NAG	E3891	47.051	53.133	43.897	1.00	71.16	O
ATOM	15892	C1	NAG	E3892	49.560	50.560	39.673	1.00	85.54	C
ATOM	15895	C2	NAG	E3892	51.079	50.372	39.365	1.00	87.01	C
ATOM	15897	N2	NAG	E3892	51.830	49.743	40.498	1.00	86.01	N
ATOM	15899	C7	NAG	E3892	53.058	50.168	41.010	1.00	88.55	C
ATOM	15900	O7	NAG	E3892	54.106	50.400	40.348	1.00	92.23	O
ATOM	15901	C8	NAG	E3892	53.194	50.394	42.509	1.00	85.72	C
ATOM	15905	C3	NAG	E3892	51.752	51.651	38.791	1.00	89.93	C
ATOM	15907	O3	NAG	E3892	53.012	51.322	38.204	1.00	93.75	O
ATOM	15909	C4	NAG	E3892	50.816	52.383	37.790	1.00	92.19	C
ATOM	15911	O4	NAG	E3892	51.469	53.394	36.980	1.00	97.04	O
ATOM	15913	C5	NAG	E3892	49.621	52.861	38.652	1.00	90.09	C
ATOM	15915	C6	NAG	E3892	48.688	53.957	38.073	1.00	91.72	C
ATOM	15918	O6	NAG	E3892	49.232	54.724	36.977	1.00	93.72	O
ATOM	15920	O5	NAG	E3892	48.877	51.689	39.028	1.00	88.11	O
ATOM	15921	C1	NAG	E4201	42.244	56.852	52.671	1.00	63.81	C
ATOM	15924	C2	NAG	E4201	43.345	57.207	51.711	1.00	65.17	C
ATOM	15926	N2	NAG	E4201	44.591	56.697	52.209	1.00	64.00	N
ATOM	15928	C7	NAG	E4201	45.518	56.163	51.423	1.00	64.41	C
ATOM	15929	O7	NAG	E4201	45.413	56.030	50.212	1.00	65.04	O
ATOM	15930	C8	NAG	E4201	46.795	55.727	52.065	1.00	64.60	C
ATOM	15934	C3	NAG	E4201	43.381	58.699	51.617	1.00	68.66	C
ATOM	15936	O3	NAG	E4201	44.262	58.910	50.571	1.00	74.46	O
ATOM	15938	C4	NAG	E4201	42.044	59.335	51.220	1.00	71.76	C
ATOM	15940	O4	NAG	E4201	41.985	60.760	51.475	1.00	76.53	O
ATOM	15941	C5	NAG	E4201	40.915	58.632	51.980	1.00	68.94	C
ATOM	15943	C6	NAG	E4201	39.614	58.830	51.256	1.00	70.71	C
ATOM	15946	O6	NAG	E4201	38.706	58.151	52.076	1.00	70.23	O
ATOM	15948	O5	NAG	E4201	41.037	57.234	52.120	1.00	65.06	O
ATOM	15949	C1	NAG	E4202	42.056	61.718	50.372	1.00	81.14	C
ATOM	15951	C2	NAG	E4202	41.295	63.019	50.736	1.00	83.23	C
ATOM	15953	N2	NAG	E4202	40.158	62.736	51.611	1.00	81.14	N
ATOM	15955	C7	NAG	E4202	40.195	62.977	52.938	1.00	81.55	C
ATOM	15956	O7	NAG	E4202	40.397	62.106	53.790	1.00	75.71	O
ATOM	15957	C8	NAG	E4202	39.997	64.413	53.403	1.00	84.96	C
ATOM	15961	C3	NAG	E4202	40.871	63.865	49.497	1.00	87.52	C
ATOM	15963	O3	NAG	E4202	40.860	65.241	49.801	1.00	91.09	O
ATOM	15965	C4	NAG	E4202	41.751	63.571	48.257	1.00	88.70	C
ATOM	15967	O4	NAG	E4202	41.562	64.296	46.993	1.00	92.75	O
ATOM	15968	C5	NAG	E4202	41.445	62.067	48.006	1.00	86.08	C
ATOM	15970	C6	NAG	E4202	42.113	61.443	46.760	1.00	86.81	C
ATOM	15973	O6	NAG	E4202	43.309	60.781	47.074	1.00	86.56	O
ATOM	15975	O5	NAG	E4202	41.555	61.202	49.146	1.00	82.49	O
ATOM	15976	C1	MAN	E4203	41.597	65.753	46.758	1.00	96.52	C
ATOM	15978	C2	MAN	E4203	42.878	66.374	46.086	1.00	98.52	C
ATOM	15980	O2	MAN	E4203	43.726	65.559	45.284	1.00	94.95	O
ATOM	15982	C3	MAN	E4203	42.475	67.691	45.329	1.00	104.12	C
ATOM	15984	O3	MAN	E4203	42.359	67.581	43.900	1.00	106.03	O
ATOM	15986	C4	MAN	E4203	41.185	68.311	45.942	1.00	105.60	C
ATOM	15988	O4	MAN	E4203	41.065	69.698	45.630	1.00	108.12	O
ATOM	15990	C5	MAN	E4203	41.097	68.015	47.482	1.00	102.96	C
ATOM	15992	C6	MAN	E4203	39.839	68.676	48.110	1.00	104.13	C
ATOM	15995	O6	MAN	E4203	39.443	67.969	49.283	1.00	100.82	O
ATOM	15997	O5	MAN	E4203	41.313	66.623	47.864	1.00	97.25	O
ATOM	15998	C1	NAG	E5041	12.333	62.275	39.325	1.00	137.11	C

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ATOM 16001  C2  NAG E5041      12.986  63.604  39.616  1.00138.53           C
ATOM 16003  N2  NAG E5041      13.364  63.660  41.044  1.00136.10           N
ATOM 16005  C7  NAG E5041      14.433  63.080  41.645  1.00128.39           C
ATOM 16006  O7  NAG E5041      14.366  62.041  42.320  1.00122.17           O
ATOM 16007  C8  NAG E5041      15.723  63.845  41.521  1.00127.26           C
ATOM 16011  C3  NAG E5041      12.054  64.733  39.116  1.00144.44           C
ATOM 16013  O3  NAG E5041      12.354  64.855  37.737  1.00145.80           O
ATOM 16015  C4  NAG E5041      10.515  64.539  39.222  1.00148.10           C
ATOM 16017  O4  NAG E5041       9.929  65.156  40.370  1.00149.99           O
ATOM 16019  C5  NAG E5041      10.130  63.058  39.106  1.00144.50           C
ATOM 16021  C6  NAG E5041       8.913  62.764  38.230  1.00147.36           C
ATOM 16024  O6  NAG E5041       7.864  63.649  38.544  1.00153.22           O
ATOM 16026  O5  NAG E5041      11.210  62.427  38.472  1.00141.22           O
ATOM 16027  C1  NAG E5441       0.234  62.127  19.661  1.00208.01           C
ATOM 16030  C2  NAG E5441      -0.771  60.962  19.723  1.00206.40           C
ATOM 16032  N2  NAG E5441      -1.608  60.874  18.514  1.00211.28           N
ATOM 16034  C7  NAG E5441      -2.489  59.886  18.295  1.00210.66           C
ATOM 16035  O7  NAG E5441      -2.188  58.694  18.394  1.00203.38           O
ATOM 16036  C8  NAG E5441      -3.897  60.288  17.910  1.00217.87           C
ATOM 16040  C3  NAG E5441      -1.619  61.139  20.977  1.00207.06           C
ATOM 16042  O3  NAG E5441      -0.826  60.941  22.134  1.00198.40           O
ATOM 16044  C4  NAG E5441      -2.284  62.530  20.945  1.00213.89           C
ATOM 16046  O4  NAG E5441      -3.220  62.583  19.875  1.00218.05           O
ATOM 16048  C5  NAG E5441      -1.247  63.664  20.825  1.00214.53           C
ATOM 16050  C6  NAG E5441      -1.248  64.554  22.067  1.00214.73           C
ATOM 16053  O6  NAG E5441      -2.440  65.317  22.081  1.00221.76           O
ATOM 16055  O5  NAG E5441       0.074  63.184  20.624  1.00209.23           O
ATOM 16056  C1  NAG E5791       8.755  20.579  -4.659  1.00160.24           C
ATOM 16059  C2  NAG E5791      10.058  20.624  -5.492  1.00160.36           C
ATOM 16061  N2  NAG E5791      10.855  21.828  -5.207  1.00160.00           N
ATOM 16063  C7  NAG E5791      12.120  21.841  -4.740  1.00156.65           C
ATOM 16064  O7  NAG E5791      12.480  22.620  -3.870  1.00154.63           O
ATOM 16065  C8  NAG E5791      13.175  20.917  -5.291  1.00156.27           C
ATOM 16069  C3  NAG E5791       9.820  20.532  -7.008  1.00164.24           C
ATOM 16071  O3  NAG E5791      11.069  20.293  -7.622  1.00162.89           O
ATOM 16073  C4  NAG E5791       8.760  19.484  -7.413  1.00166.62           C
ATOM 16075  O4  NAG E5791       8.408  19.503  -8.803  1.00169.76           O
ATOM 16077  C5  NAG E5791       7.504  19.627  -6.540  1.00165.87           C
ATOM 16079  C6  NAG E5791       6.460  18.548  -6.894  1.00167.55           C
ATOM 16082  O6  NAG E5791       6.356  18.315  -8.298  1.00169.02           O
ATOM 16084  O5  NAG E5791       7.861  19.573  -5.156  1.00161.26           O
END
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REFERENCES

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What is claimed:

1. A crystal of a receptor-antibody complex comprising a receptor-antibody complex of an epidermal growth factor receptor (EGFR) extracellular domain and cetuximab Fab, wherein the crystal has a resolution determined by X-ray crystallography of better than about 5.0 Angstroms.

2. The crystal of Claim 1, wherein the crystal has a resolution determined by X-ray crystallography of better than about 4.0 Angstroms.

3. The crystal of Claim 2, wherein the crystal has a resolution determined by X-ray crystallography of better than about 3.0 Angstroms.

4. The crystal of Claim 1, wherein the crystal belongs to space group $P2_1$ and has unit cell dimensions a = 77.8 Å, b = 70.9 Å, c = 147.1 Å, and β = 102.5°.

5. The crystal of Claim 1, having atomic coordinates provided in Table 2.

6. A method for preparing a crystal of a complex of an epidermal growth factor receptor (EGFR) extracellular domain and cetuximab Fab comprising preparing a solution containing the extracellular domain of EGFR and cetuximab Fab fragment, and growing the crystal.

7. The method of Claim 6, wherein the pH of the solution is about 6.0 to about 8.0.

8. A method of identifying a mimetic of cetuximab comprising comparing a three-dimensional structure of the mimetic with a three-dimensional structure determined for the complex of Claim 1.

9. The method of Claim 8, wherein the three dimensional structure of the mimetic is compared with at least a subset of the coordinates provided in Table 2.

10. The method of Claim 8, wherein identifying a mimetic is carried out by comparing the three-dimensional structure of the mimetic against the coordinates of at least one EGFR amino acid bound by cetuximab Fab.

11. The method of Claim 9, wherein the EGFR amino acid is selected from the group consisting of Gln 384, Gln 408, Ser 418, Ser 440, Lys 465, Ser 468, and Asn 469.

12. The method of Claim 8, wherein the locations of atoms of the mimetic that contact EGFR correspond to atoms of cetuximab that contact EGFR.

13. The method of Claim 8, wherein identifying a mimetic comprises comparing a three dimensional structure of a mimetic with the atomic coordinates of a region of EGFR selected from the group consisting of about amino acid residue 350 to about amino acid residue 354, about amino acid residue 380 to about amino acid residue 385, about amino acid residue 405 to about amino acid residue 420, about amino acid residue 435 to about amino acid residue 475 and combinations thereof.

14. The method of Claim 8, wherein the mimetic is a small molecule.

15. The method of Claim 8, wherein the mimetic is a peptide.

16. The method of Claim [0014], wherein the peptide is an antibody or a fragment thereof.

17. The method of Claim 8, wherein the method is carried out with use of a computer.

18. The method of Claim 8, further comprising synthesizing the mimetic and assaying its binding or physiological activity.

19. The method of Claim [0017], wherein the mimetic binds to EGFR with similar affinity as cetuximab Fab.

20. The method of Claim [0017], wherein the mimetic inhibits dimerization of EGFR expressed by a cell.

21. The method of Claim [0017], wherein the mimetic inhibits tyrosine kinase activity of the receptor.

22. The method of Claim [0017], wherein the mimetic blocks binding of EGF to EGFR.

23. A method for identifying a mimetic of cetuximab, comprising:

(a) introducing *in silico* substitutions in at least a single CDR region of cetuximab to obtain a pool of variants; and

(b) using a computer and at least a subset of the EGFR coordinates provided in Table 2 to select a variant with improved EGFR binding characteristics.

24. The method of Claim 23, further comprising determining the biological activity of the mimetic.

25. The method of Claim 23, wherein at most a single substitution is made in each CDR.

26. The method of Claim 23, wherein substitutions are made solely in a CDR3 region.

27. A computer-assisted method for identifying a potential antagonist mimetic that binds the extracellular domain of EGFR comprising a processor, a data storage system, an input device, and an output device, comprising:

(a) inputting into the programmed computer through said input device data comprising the three-dimensional coordinates of a subset of the atoms of EGFR as set out in Table 2;

(a) providing a database of chemical and peptide structures stored in said computer data storage system;

(b) selecting from said database, using computer methods, structures having a portion that is structurally similar to said criteria data set; and

(b) outputting to said output device the selected chemical structures having a portion similar to said criteria data set.

28. A machine-readable medium having stored thereon a plurality of executable instructions to perform a method to identify a mimetic of cetuximab using a crystal of a receptor-antibody complex comprising a receptor-antibody complex of an epidermal growth factor receptor (EGFR) extracellular domain and cetuximab Fab, the method comprising:

comparing a three-dimensional structure of a mimetic with a three dimensional structure an epidermal growth factor receptor (EGFR) extracellular domain and cetuximab Fab having an X-ray crystallography resolution of better than about 5.0 Angstroms.

29. The machine-readable medium of Claim [0019], wherein the EGFR coordinates comprise at least a subset of the atomic coordinates of Table 2.

30. The machine-readable medium of Claim [0019], wherein the three-dimensional structure of the mimetic is compared with at least a subset of the atomic coordinates of Table 2.

31. The machine-readable medium of Claim [0019], wherein identifying a mimetic comprises comparing the three-dimensional structure of a mimetic with a three-dimensional structure of at least one EGFR amino acid bound by cetuximab Fab.

32. The machine-readable medium of Claim [0019], wherein identifying a mimetic comprises comparing a three dimensional structure of a mimetic with the atomic coordinates of a

region of EGFR selected from the group consisting of about amino acid residue 350 to about amino acid residue 354, about amino acid residue 380 to about amino acid residue 385, about amino acid residue 405 to about amino acid residue 420, about amino acid residue 435 to about amino acid residue 475 and combinations thereof.

33. A machine-readable medium having stored thereon a plurality of executable instructions to perform a method for identifying a mimetic of cetuximab, the method comprising:

(a) introducing *in silico* substitutions in at least a single CDR region of cetuximab to obtain a pool of variants; and

(b) using a computer and at least a subset of the EGFR coordinates provided in Table 2 to select a variant with improved EGFR binding characteristics.

34. A cetuximab mimetic identified by the method of any one of Claims 8 to 27.

35. A method of inhibiting EGFR comprising administering a mimetic of Claim [0022].

36. A method of inhibiting tumor growth in a mammal comprising administering a therapeutically effective amount of a cetuximab mimetic of Claim [0022].

37. The method of Claim 36, wherein the tumor expresses EGFR.

38. The method of Claim 36, wherein the tumor overexpresses EGFR.

39. The method of Claim 36, wherein the tumor is a primary tumor.

40. The method of Claim 36, wherein the tumor is a metastatic tumor.

41. The method of Claim 36, wherein the tumor is a refractory tumor.

42. The method of Claim 36, wherein the tumor is a vascularized tumor.

43. The method of Claim 36, wherein the tumor is selected from the group consisting of a colorectal tumor, a head and neck tumor, a pancreatic tumor, a lung tumor, a breast tumor, a renal cell carcinoma, and a glioblastoma.

44. The method of Claim 36, wherein the cetuximab mimetic is administered in combination with an anti-neoplastic agent.

45. The method of Claim 44, wherein the antineoplastic agent is a chemotherapeutic agent.

46. The method of Claim 44, wherein the antineoplastic agent is irinotecan (CPT-11).

47. The method of Claim 44, wherein the antineoplastic agent is radiation.

48. The method of Claim 36, wherein the cetuximab mimetic is administered in combination with an EGFR antagonist.

49. The method of Claim 48, wherein the EGFR antagonist is an intracellular EGFR antagonist.

50. The method of Claim 36, wherein the cetuximab mimetic is administered in combination with a VEGFR antagonist.

51. The method of Claim 36, wherein the cetuximab mimetic is administered in combination with an insulin like growth factor receptor (IGFR) antagonist.

52. A method of treating a hyperproliferative disease comprising administering a therapeutically effective amount of a cetuximab mimetic of Claim [0022].

53. The method of Claim 52, wherein the hyperproliferative disease is psoriasis.

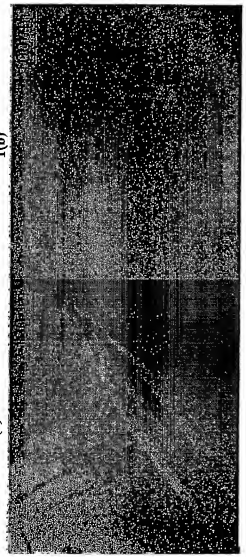
54. The method of Claim 52, wherein the cetuximab mimetic is administered in combination with a topical or systemic agent for psoriasis.

55. The method of Claim 52, wherein the cetuximab mimetic is administered in combination with a corticosteroid.

56. The method of Claim 52, wherein the cetuximab mimetic is administered in combination with a retinoid.

Figure 1- Cetuximab Fab:sEGFR crystals

1(a) 1(b)



Cetuximab Fab:sEGFR

Crystallization condition 15% PEG 3350, 250 mM Ammonium Sulfate, 100 mM Imidazole, pH 7.5.

FIGURE 2- Cetuximab Fab:sEGFR complex

Space group	$P2_1$
Cell dimensions	a = 77.8 Å b =70.9 Å c =147.1 Å β= 102.5
	One Fab:sEGFR complex in the a.u.
X-ray source	CHESS A1
Resolution limit	2.8Å

Native Data Set From CHESS A1 to 2.8 Å resolution

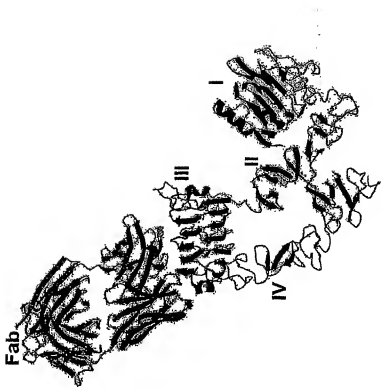
Observed/unique	141,255/38,177
Completeness	99 % (90.6 %)
Rsym	0.03 (0.33)
$<I/\sigma I>$	16.8 (5.6)

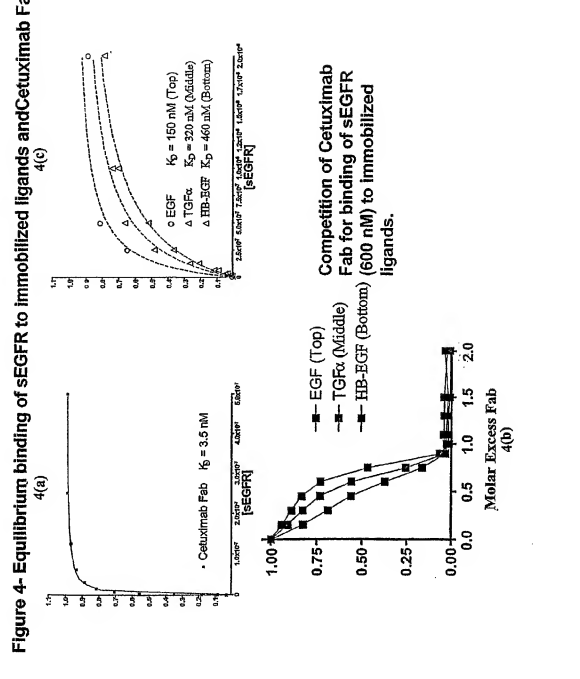
Phasing Molecular Replacement using tethered sEGFR, and coordinates of Fab.

Current Refinement (GNS) R_{factor} = 22 % R_{free} = 27 %

Rmsd bonds lengths	0.028 Å
Rmsd bond angles	1.13°

Figure 3- Cetuximab Fab:sEGFR complex





SEQUENCE LISTING

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The University of Pennsylvania
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Ferguson, Kathryn M.

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